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What is

modern photography

... page 146 ▶



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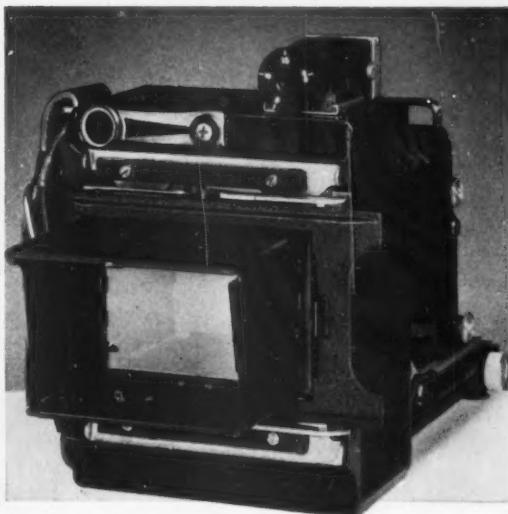


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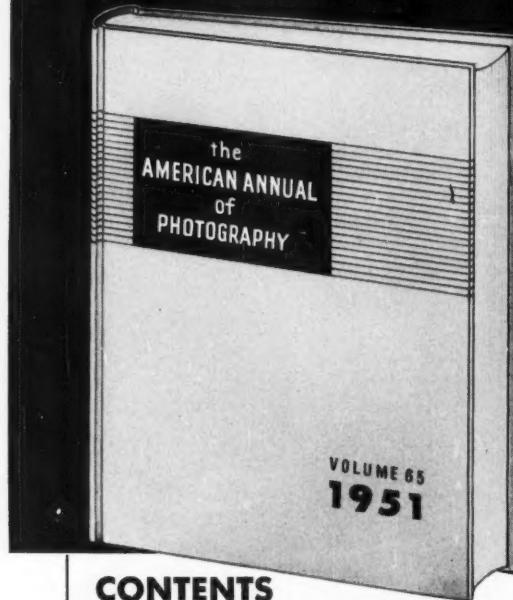
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CINEMATOGRAPHY AS A GRAPHIC ART — Peyton M. Stallings, production manager of educational films at the University of Minnesota, makes a plea for elevating movies to an unfilled art niche.

HYDROGEN ION CONCENTRATION — Allen R. Greenleaf, photo-chemical expert, deals in lay language (in spite of the title) with the importance of relative acidity of photographic solutions.

PHOTOGRAPHY AND CRIMINALISTICS — Charles E. O'Hara and James W. Osterburg, New York police experts, present the place of the photographer in crime detection . . . and offer a stirring challenge.

Plus: *Pictures in the Fog* by Jack Wright; *Marine Photography* by J. R. Hogan; *Masking Correction* by E. M. Symmes; *Down on the Farm* by Georgia Engelhard; *Using the Swing Back* by W. W. DeAtley . . . and our 64 Pictorial Illustrations representing an accurate cross-section of the world's finest work in pictorial photography . . . with cogent commentary by Franklin I. Jordan, the editor. And of course, *Who's Who in Pictorial Photography*, the statistical tabulation of your salon activities.

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THE AMERICAN ANNUAL OF PHOTOGRAPHY • 1951

edited by

Franklin I. Jordan, FPSA, FRPS

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Close-Ups

OUR READERS have been impatient for Andrew Henninger to continue his series to the point of actual construction details. This issue presents the first of two articles, this one detailing what parts are needed and their function in the speedlight. Next month's article will explain the actual step-by-step details of building your own set.

There are an amazing number of home-constructed sets in use today and only a comparatively small amount of manual skill is needed. Even if you don't plan to build your own, these two articles will give you a much better idea of how one actually works so that you will understand the operation of your factory-built equipment better.

It is unfortunate that more photographers do not construct equipment and experiment with it. As Herbert McKay in his *Notes from a Laboratory* observes this month, there is a lot of unnecessary confusion and grief which would be obviated simply by trying things out.

Jack Wright, no stranger to our audience, returns this month to introduce Francis Wu, a fabulously productive worker who, in addition to producing prints which are hung in exhibitions all over the world, is now editing *Chinese Photography*, an interesting magazine issued under great handicaps.

Our competition is announced this month. There are some changes in the rules and procedures so please read them carefully. Every salon and competition is forced to reject many good pictures each year because they did not comply with the arrangements necessary to keep the operation running smoothly.

In the back of the book there are some changes to make it of greater value to camera club members and pictorialists. Club secretaries are again urged to send all their news to Samuel Grierson, 1155 Dean St., Brooklyn, 16. The award-winning prints in club competitions and salons are always welcome in our pages. These should be mailed directly to our editorial office in Minneapolis. They will be returned promptly after use.

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VALENTINE

John A. Valentine, superintendent of the Milwaukee Art Institute and one of the prime movers behind the recent Six States Exhibit, begins the invigorating exchange of ideas promised in this month's editorial.

HENNINGER

Here is the climax to Andrew Henninger's popular series on the speed-light . . . Taking all the components listed in this month's installment, the author provides you with complete details on building your unit.

McKAY

No one exceeds Herbert C. McKay as a master in the art of presenting fundamentals of photography in the most fresh and vital manner. His follow-up to the February article on the optical bench is no exception.

GRIERSON

Section Two in American Photography's new division of contents is again introduced by Sam Grierson's club notes as he presents a one-man show and discourse by Edith Worth, New Jersey camera enthusiast.

PLUS

A "build-it" article by Roland Wolfe on a handy print display stand; a pictorial section featuring six prints by three active contemporaries; an expose of the camera repair racket, and notes on a new camera.

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March, 1951

Volume 45, No. 3

HOW TO PHOTOGRAPH ACTION ON ICE 143

Louis Glessmann has a successful method for stopping action and getting good pictures of professional ice skating which he passes on to you.

WHAT IS MODERN PHOTOGRAPHY 146

Walter Rosenblum provides an account of the symposium held at the Museum of Modern Art, accompanied by quotations and pictures from the participants.

SPEEDLIGHT: HOW TO BUILD IT (PART I) 158

Andrew F. Henninger explains in simple language the necessary parts of every circuit and their functions as a preliminary to constructing your own outfit.

MEET FRANCIS WU, PICTORIALIST 177

Jack Wright tells the interesting story of the photographer whose career as an exhibitor, working cameraman and editor makes him preeminent in the Far East.

TRY SHOOTING YOUR HOME-TOWN INDUSTRIES 184

Paul O. Anderson has been successful with a type of subject usually overlooked by amateurs. Read this for new ideas and methods applicable to your own work.

THIS MONTH'S COVER

Our cover is by Allen Downs, Assistant Professor in the Department of Photography of the University of Minnesota. An outstanding young photographer, Downs has had several one-man shows, and has had pictures purchased for the permanent collections of the Museum of Modern Art and the Milwaukee Art Institute.

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POSITIVE and NEGATIVE

We Like Them, Too

Gentlemen:

In the October issue of AMERICAN PHOTOGRAPHY you published four beautiful art photos of the nude by Mr. Tulchin.

In my opinion, you should publish more of Mr. Tulchin's works. I consider him a great artist.

Only few photographers, these days, can really make artistic pictures of the nude. I must say that your magazine is the best of all the photography publications, because it really considers photography as an Art.

Hoping we will see more of these top artists' work.

Jean Turgeon
Longueuil, Quebec, Canada

Records for Salon Prints

Dear Sir:

I have just received the October issue of AMERICAN PHOTOGRAPHY and have looked it over with great interest. I have read Mr. Atwater's article on "The Salon Judge" and feel that he has presented his case very well.

I would, however, like to call your attention to the caption under his print, "La Fuente," that it has been hung in 102 salons, possibly a record. Mr. Fraprie has at least two prints which were hung in more than 102 salons. "Warmth of the Winter Sun" was hung in 191 salons all over the world and "Repose" in 106.

Marjorie R. Fraprie
Brookline, Mass.

Sharp-Eyed Readers

Dear Editor:

. . . Now I agree that Mr. Doscher is an artist in his own right. By controlled printing, by extending the clouds horizontally to break the merger of clouds and steeple, and by removing the telephone wires, he has made a delightful and satisfying photograph. But, he didn't make the finished print from figure three [November issue, page 53.]

. . . I believe there were at least five prints in the original sequence instead of the four pictured here. None the less the finished product is a very pleasing picture.

George W. McCullough
Atlantic City, N.J.

Dear Sir:

. . . I am wondering whom you are trying to kid. Regardless of controls in printing and extension of the clouds, both pictures were *not* made from the same negative . . . The large picture was obviously made from a negative taken between the third and fourth small pictures.

I am not being critical, just technical.

Yours very truly,
J. Kirby Bransby
Youngstown 2, Ohio

Bottle Caps, Again

Gentlemen:

Answering Floyd H. Simmons' (Des Moines) inquiry (December issue) about where to buy plastic tops for quart brown bottles, I purchased plastic tops for both quart and pint bottles last week from Peerless Camera Stores, Inc., 138 E. 44th St., New York 17, N.Y. They cost 5 cents apiece.

Yours very truly,
B. E. Barnes
Yonkers, N.Y.

There'll Be Lots More

Gentlemen:

Read the excellent article on "Speed-light" by Andrew F. Henninger in the November issue. By all means let's have an article by Mr. Henninger on "How to Build a Speedlight," and a following article on "How to Use a Speedlight." Have been enjoying your magazine for 14 years.

Sincerely,
M. M. Michael
Chicago 47, Ill.

LETTERS TO THE EDITOR are welcomed from all readers on any subject. Please sign your name and address to all correspondence since anonymous letters are destroyed. If you prefer your name not

be used, mention the fact and your confidence will be held. Pictures sent for this column will not be returned unless a stamped, self-addressed envelope is enclosed. Ed.



Notes from a Laboratory

by Herbert C. McKay
F.R.P.S., A.S.C.

PERHAPS EVERY SERIOUS photographer is deeply interested in the scientific bases of photography; yet, for the most part, his only knowledge is that gained from reading, rather than from actual experiment. Today the equipment of even a modest laboratory demands a small fortune. For example, how many of you have ever seen a recording spectrophotometer in operation? How many of you have ever operated a small spectrograph? How many have even peeked into a simple Bunsen type spectroscope? Yet spectrometric study is essential in determining the color response of emulsions and the production (as well as use) of filters.

This remoteness of the laboratory has forced upon the modern amateur a passive role which he accepts only because he believes he must. His ever growing curiosity is unsatisfied, and he does what he can through reading at second or third hand about the work he would like to do for himself.

Now let us travel back through time for a century. Then science was in its infancy, and it had captured the fancy of the world. Science was a hobby and a topic of drawing room conversation among gentlemen (and a few "advanced" ladies). Demonstrations were held at the town centers, and there was scarcely a man who had any pretensions to intellectual position who did not perform many of the currently admired experiments for himself.

Spectroscopy was a modern miracle. So did some ambitious instrument dealer issue a line of elaborate laboratory instruments sold upon "easy payments"? Not at all. The optician's shops sold prisms. Our gentleman took one home, darkened the windows, carefully cut a slit through one of his wife's prized Holland shades

and projected the spectrum upon a wall opposite the window. He may have paid \$1 or so for the prism, but you can get one as good today for a few cents. If you want a fine prism with optically polished faces you will pay for it, but gain nothing as far as simple experiments are concerned.

If our man happened to be interested in photography, he would naturally want to photograph the spectrum. So he went to work upon the dining room table, just as the modern man does when he wants to "help junior" assemble a model plane. A box was built, and perhaps the town clock-maker called upon for some brass fittings, and eventually the box-spectroscope-camera was complete. Then what? The glass prism effectually cut out most of the ultraviolet to which the emulsion was sensitive, and the emulsion would record the visible spectrum perhaps down into the mid blue-green, and that was that. A lot of trouble for unsatisfactory results, but the experimenter had the pleasure of gaining first hand experience.

Yesterday and Today

What could happen today? A concave grating is purchased, a simple box built around it, a slit provided and upon a modern panchromatic film, the experimenter can record everything from about the 2250 region right down to the end of visible red, and separate the D lines by a considerable interval. The trouble is that few such experimenters are now working.

Our man of a century ago, if he were interested in polarized light, purchased a pair of tourmalines, or if he were wealthy a pair of brass mounted Nicols. He picked up an assortment of mica sheets and went home to work. A book of that period contains explicit

instructions for making some of the most beautiful mica patterns imaginable, but which involve a degree of labor which most of us would consider prohibitive. Would you care to spend 10 or 12 hours assembling a one-inch checkerboard of mica just to see the wonderful color display it exhibits under polarized light? Yet, a set of display micas such as those would command record attendance if placed upon public display.

For example, would you not like to see a peacock in all the splendor of its (almost) natural color, and then to see those colors blend and change until each point in the picture goes through a spectral cycle, yet retains its specific relative spectral order? It is one of those things which are truly unimaginable.

Curiosity Is Play

Now the modern scientist will say, "But what value has all this amateurish poppycock?" And there we have the crux of the matter. Does everything have to have some value, some purpose? Why cannot we pursue studies and perform experiments simply for the satisfaction of curiosity and mental exercise, exactly as we play tennis or baseball? A century ago science was a kindly and gracious thing; it was part and parcel of intellectual life. It was something whose beauty rivalled the fine arts; and such indeed should be one aspect of it today. Then too, scientific experiment, albeit elementary, was a part of everyday life. And it can fill that highly important place again.

We are fond of referring to the present as the golden age of science, but is it? I doubt it. The true golden age of science lay in the past centuries, as far back as the sixteenth. Today we are living in the greenback age of science, when the brilliant *basic work* of our predecessors is being improved and developed to amass fortunes in hard cash.

Today the Patent Office is turning out patents by the multiple thousands, but most of those which are put to use originate in commercial research laboratories and are obtained for the financial protection of the owners. That is perfectly all right, of course. They have a right to protect their investments, but all the same it is hardly the most brilliant aspect of science.

For example, the original invention of the achromatic lens was a brilliant

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GENERAL ELECTRIC

608-75

stroke of genius, but once it had been done only the most abysmal ignorance could fail to carry on the work which has given us our knowledge of refractive indices and the formulation of many types of compound lenses.

The man who saw an image projected through an accidental "pinhole" in the wall of the room and then proceeded to build the first crude camera obscure was far more of a genius than the group of followers whose work has culminated in the modern motion picture camera.

The vulcanization of rubber was first done upon a kitchen stove, and then by accident. The steam engine, the reaper, the sewing machine and cotton gin were laboriously hand built by individuals who risked their whole fortunes upon certainty of their ability. This work by individuals laid the foundation of our modern glittering structure of science.

The whole point is that there is no reason why you should not work in the same way, if your inclinations lie that way. You do not need the equipment of a research laboratory to satisfy your curiosity; but the general habit of thought has brought us to the point where we prefer to read the works of the "authorities," rather than make experiments. And I only wish to point out that those who proclaimed the world to be flat; those who stated the earth to be the center of the universe; those who burned witches at the stake were all "authorities" no more fallible than those of today.

Who's Perfect?

Only when man has accumulated all possible knowledge and has therefore reached the point of complete stasis, and death, can there be an infallible authority; only then, when the value of authority has ceased to exist. We must never lose sight of the fact that we are not superior to our predecessors, and that future ages will regard our own as being as stupid and primitive as we regard the days of our forefathers. We are rapidly developing a national complex quite similar to that of the head of the Patent Office who, in the past century, resigned "because there was nothing possible left to invent!" We are very far from perfect; we are only at the threshold of the infancy of human progress and much, even most of our knowledge of today is destined to be cast aside as erroneous in the ages to come.

Our true scientists are well aware of this, and they all display a sensible and becoming modesty and caution regarding absolute statements; but the mass-production "scientist," particularly in the first decade after receiving his degree, is by far too much inclined to regard today's scientist as omniscient.

Possibilities in Color

For example, consider the field of color photography. You can hardly be expected to develop some new color emulsion; but you might develop a new printing process. Still that is quite an ambitious project. What about the color experiments which you can perform and which will have both theoretical and practical value?

What is wrong with color? The fault lies principally in the refusal of natural conditions to conform to the norm upon which the film's color sensitivity is based. One of the great curses of modern scientific work is the norm, but it is practically impossible to work without this necessary but fictional term.

So your films are off-color. There is an overcast of blue, or muddy brown-purple, or an unpleasant mustard green. As long as this overcast is but a hint, you accept the picture and probably not one person of a dozen who see it will notice anything wrong. But the error is there. In fact among "good" color shots, more than half will exhibit some degree of off-color. This is particularly objectionable in stereo where there is such a close connection between color balance and depth perception. What can you do about it? Of course you can (and should) use a color temperature meter and a set of compensating filters, but if the slide is already made, this will not help.

Try examining your color slides with a sheet of colored cellophane behind the slide; but be sure to pick delicate tints of blue or yellow or pink-orange. It is possible that you will be surprised at the great improvement shown. Unfortunately you will not find the color which is just right for the purpose, and here at last we come to the point of personal experimentation as applied to one problem.

First of all fix out some old, undeveloped film and wash it thoroughly. This is your base. Now mix dyes and dye pieces of this film. Experiment with dye saturation, length of immer-

sion, "cutting-out" with acid. Experiment with mixtures of dyes. You will have trouble of course, but if you did not, what would be the point! I'm not going into the details of emulsion dyeing. You will find that in any description of dye transfer printing. More to the point, where will you get the dyes? You can get the red, yellow, blue from dye-transfer supplies, but what about the others? Which are fast and which are unstable? Which are acid and which basic?

Get some drugstore dyes, colored inks, biological stains, any kind of dye. Try them out! You will soon find whether two dyes will mix by simply mixing them. Dye strips of paper and expose them to direct sunlight two or three days with a portion of the strip covered with black paper. You will learn which are fast. Of course this isn't the "scientific" method of approach, but it is the method which will give you knowledge, and incidentally enable you to do far more than you could hampered by the conventional limitations.

An "Impossible" Filter

I have a filter in my laboratory, now five years old and not altered appreciably, which was made with ordinary "Diamond" dyes. Impossible of course, but it was made as an experiment and proved successful.

When you have played with dyes for a few weeks or months, make up your filter squares for color slides. You can work out a series which will do a beautiful job of correction upon many of your slides. But when you project them, the effect will not be at all what you want.

You have forgotten that the colors you see in the slide are the color of the illuminating light as modified by the slide colors. A color slide cannot have the same color values under a yellow incandescent as it has illuminated by a high power projection lamp; nor will a yellowish white screen give the same color values as a blue-white one. You will have to make your color adjustments in view of optimum viewing conditions.

Now go ahead. You may stain some of your wife's best dinnerware and spot the sink, but you will have so much fun that you will be glad to send your wife out to buy a new hat and to get a quart of whiskey to pacify the building superintendent. Just how you will explain to the boss the rea-

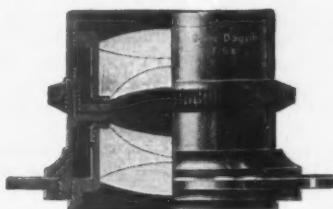
son for the rainbow-hued fingers you take to the office I leave to you.

But above all, try the thing out instead of asking questions. Much of my correspondence consists of such letters as, "What would happen if I were to double the carbonate in a print developer?" Can you imagine anyone writing such a letter, then sitting down to wait two or three weeks for an answer? Even when the reply reaches the correspondent, he has no more real

knowledge than he had before, yet in 20 minutes he could go into the darkroom, load up a developer with carbonate and get his answer. Not only that, but he would acquire some dependable, firsthand knowledge which he could use to practical advantage many times.

It has been said before in this column, but I shall take the risk of repeating it:

Do not ask, DO.



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- 2.** All types of pictures are welcome in the Competition—pictorial and documentary, straight and manipulated, purist or experimental. Series of related pictures may be entered as a unit and should be numbered in sequence. No color prints will be considered.
- 3.** Each print should have clearly printed on the reverse side the maker's name and address and all available data on exposure, development and printing procedure.
- 4.** Wherever necessary, a model release should be available upon request.
- 5.** American Photography assumes no responsibility for loss or damage to prints. However, all reasonable care will be taken while they are in our possession.

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- 6.** Prints must be securely wrapped and have sufficient postage. Packages on which carriage charges are asked will not be accepted.
- 7.** Prints from abroad should be marked, "Exhibition Prints, No Commercial Value."
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- 9.** Prints chosen for awards will be retained and published in American Photography and/or the American Annual of Photography. Exclusive rights are NOT required, nor are any other commercial rights requested, except necessary use in publicity releases and advertisements announcing the results.
- 10.** If it seems advisable, the prize-winners will be exhibited in several places in the United States.

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- 11.** Prints must be received not later than May 31, 1951 to be eligible. Submission of an entry shall be sufficient indication that the contestant agrees to the rules as published here.



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George B. Wright



New

Standards for Photography (I)

IN A PERIOD such as ours the established approaches to the arts are subject to challenge and re-evaluation. It would be a matter of some surprise if this were not so. We have lived through the depression-30's, the war-40's and into a period of precarious peace. The world has altered and the arts with it.

Art always reflects, usually in advance, the changes in human organization and opinion. It is the most sensitive barometer we have to the social climate. For art is not an isolated activity: it is part of human functioning, part of the pattern of daily living.

This is especially true of photography and accounts for the quantity—and the intensity—of the discussion going on today. The symposium on "What is Modern Photography" recently held at the Museum of Modern Art and reported on in this issue and the panel at the PSA convention are recent examples and are merely evidences of the countless informal discussions going on among photographers and critics.

After listening to and participating in some of this discussion, it would seem that the real need is a clearly defined and acceptable set of canons of criticism. It seems evident that we are not all speaking the same language. Our vocabularies may be identical, but the meanings of the terms shift, depending on the background and predilections of the speaker. As a result, a great deal of the discussion adds to the confusion rather than serving the more complete understanding of our medium and its present situation.

If all this discussion is to unite us toward a better appreciation of work and toward the production of better work, rather than to divide us further, we need to know our assumptions clearly. We must define our basics before we build a structure of belief.

To arrive at any solution which will be acceptable to a reasonably large group today, to arrive at a solution which will aid in the production of legitimate and forward-looking work, our assumptions

and our vocabulary must include *both* the purely esthetic and the social aspects. A photograph, like any artifact of man, must be judged from this double viewpoint.

We can certainly hope for no unanimous agreement among all critics on this. But if a minimum ground of common consent in the use of terms is reached, the issue can be stated clearly enough so that both agreement and disagreement can become meaningful. Actually, disagreement is quite as useful as agreement. We should not strive for a static assent which forges shackles to creativity. We should only desire a common vocabulary or social and esthetic criticism among the majority of workers so that the discussion, and the differing points of view, can be clearly understood.

It should not seem unfortunate, either, that a necessity for discussion should exist at this time. Pictures, of course, are made primarily to be looked at, not to be verbalized. The verbiage becomes necessary only when there is a serious lack of agreement not only about "placing" individual pictures but about the function of all pictures. In our day when there is a general confusion of standards, when there is a sharp difference between thinking and feeling, such confusion is natural. It is a mark of an era full of life and movement—of danger, even—and such periods are interesting ones in which to live.

Temporarily, the talking is as important as the looking. The real problem is to put the discussion on such a basis that it will achieve its purpose: *to establish standards, to unite our thinking and emotions.*

AMERICAN PHOTOGRAPHY will suggest some tentative approaches to the solution of this problem on this page in future issues. They will be offered as tentative in the hope of provoking comment and stimulating the examination of fundamentals. Arriving at a set of values which will be useful as a standard for a few years until a better one evolves is the result only of such an examination, not the result of cosmic legislation.



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*Louis Glessmann explains his
successful yet simple
methods of photographing*



...action on ice

GOOD "ACTION" ICE-SKATING pictures are scarce. The reason? Most amateur photographers think it too difficult a feat for their modest equipment. Practically all action ice-skating pictures are taken by photo houses which have at their disposal the latest and the most expensive lighting equipment. Consequently, when an ice-skating photo is published, it carries a caption stating that the photo was taken with three speedlight units at

1/5000 second on an 8x10 view camera. So you shake your head and say, "I guess my equipment won't handle that type of picture."

Nothing could be so far from true.

Any camera with shutter speeds up to 1/200 to 1/400 second can take top action ice-skating pictures. All pictures illustrating this article were taken indoors at 1/400 second with two flash-lamps. Photographers who own cameras with shutter speeds less than

1/200 second are still able to capture good action shots. They need only remember to shoot from a greater distance and to avoid right angle shots. Shooting from farther away assures your stopping the action, yet you can project the image to cover the entire print area.

If a 1/400 second isn't available, try to change your angle of view so that the action is either coming straight toward you, or coming from a very



Pretty Peggy Bauer looks surprised, but gleeful. A posed picture, of course, taken with a Crown Graphic, 1/400 at f/16, one Press 40 flashbulb three feet to right of camera. The girl on the previous page is Eileen Seigh, Olympic champion. She was taken with two bulbs, a Press 40 on a 15-foot extension to the left and a Press 25 on the camera, 1/400 at f/8, on Super-XX developed in DK60a.

small angle. In this way, shutter speeds of 1/50 to 1/100 second are sufficient to record the action.

Every frozen pond and ice rink in America is filled with people who are only too eager to pose for you. Ice skaters like to see good action photos of themselves. Ice skating is now considered by its devotees an art of the highest type. Like ballet dancers, ice skaters practice many hours a day and, through your pictures, can study arm, hand and facial positions. Pictures caught at peak action disclose to the skater many items of interest.

Professional skaters are also in need of good prints to be used for publicity and advertising. In order to become established in this work, decide upon one place to take your first few sets of pictures. Photographing at one rink or pond over a period of time will give you both confidence and the ability to do away with the many variables of backgrounds, lighting conditions, exposure and angles. This will enable the photographer to concern himself solely with the model's pose.

Promise your skating friend a good-sized print of every picture taken, and deliver them as promised. Your reputation can be either established or broken by your dependability. If your pictures possess good print quality, stopped action and sharp clear detail, you will soon find skaters coming to you for skating photos.

Maintaining sharp focus of rapidly moving skaters appears to be a very difficult matter to the beginner. Actually, it is simplicity itself. I have used two different methods.

The first method consists of simply having your skating friend scrape a little pile of ice on the spot where the pictures will be taken. Focus upon this spot and have the skater perform his stunts at that point. You will find skaters are very talented in doing their tricks exactly in the pre-focused spot. This method will be used in the majority of your skating shots.

The second method of obtaining sharpness is called "zone focusing." Zone focusing means nothing more than setting the stop to a certain aperture and the distance scale to a certain point. Any object within the limits specified by the "depth of field" chart will then be reasonably sharp. To illustrate, a six-inch focal length lens with the distance scale set at 15 feet, aperture closed down to f/16, gives a zone of sharp focus from approximately 10



An example of the sort of publicity pictures which ice skaters, like other public performers, always like. They can be taken by anyone who has a camera which can be synchronized for flash or electronic flash.

to 29 feet. This method may be used when taking candid shots or when time will not allow for accurate focusing. Remember also that the smaller the aperture, the greater the zone of sharp focus.

The majority of good publicity ice-skating pictures are taken with the aid of artificial illumination. Learning to use your flashgun correctly may be the one factor which lifts your skating photos out of the ordinary class into the top-notch category. I do not say that good pictures cannot be made in sunlight. They can. However, you have more control over conditions with the aid of flash. In outdoor photos, flash can open shadows caused by harsh sunlight. Daylight flash allows you to either lighten or darken the background. Many worthwhile articles have been written on how daylight flash operates, so I shall not go into this phase of work in detail.

When you shoot at an indoor rink, flash almost becomes a necessity. If you have a very fast lens, f/1.5 or f/2, you need not use flash for correct exposure, but your picture will lack the snap and brilliance of a flash picture.

The ideal equipment for the average amateur consists of two flashlamps. Using one on a 15 foot extension, you may record many different dramatic effects. Backlighting is especially appropriate for action skating shots as it portrays the feeling of movement. Always remember to have only one main lamp. Use the other as a fill-in only, and possibly cover the fill-in lamp with a handkerchief to prevent double shadows. The secret of learning how to achieve dramatic effects is to try it out, remembering previous

lighting arrangements, rejecting the bad ones and always looking for better placement of lamps.

Let us run through the actual procedure for taking a series of pictures.

1. If you have an appointment with a client, make sure you arrive early enough to set up your camera and equipment before he arrives. Don't fiddle with camera equipment in front of a client as this tends to make him lose confidence in your ability.

2. Check your equipment thoroughly, *at home*. Make sure your batteries are at peak capacity. Nothing will wear a battery down more quickly than cold weather. An ammeter to check the number of amps given out by a battery is a wise investment. Each battery should register at least seven amps to fire your flash gun properly. Nothing

is so discouraging to both photographer and subject as having a flashbulb fail to go off. A circuit tester is also a wise piece of equipment to have in your gadget bag. With it you can test to see if the extension flash is making good contact with your battery. This tester also permits you to check bulbs.

3. Ice-skating pictures demand previous planning. Know what you want before you arrive. Once actual shooting starts, each shot should immediately follow in sequence. In this way, a mood is set, and photographer and subject are co-ordinated. A few changes may have to be made, perhaps in lighting or exposure. However, these disturbances should not interrupt the feeling of confidence and assurance between the artist and the photographer.

Articles on any type of photography can never take the place of actual experience. Go out with your camera and take pictures, more pictures and still more pictures. Someone once said, "Every great artist was once an amateur." The only way to learn any phase of photography is by actually doing the work. Each mistake and its correction should be another obstacle overcome on the road to better photography.

Luck is a factor which is certainly present, but can never be depended upon for results. Patience and hard work, plus a knowledge of the fundamentals of ice-skating photography will assure you of top-notch, salable photographs.

Backlighting makes this leap more spectacular in a print. A Press 40 on extension furnished the main light, a Press 25, the fill-light on the camera. Stopped at 1/400, f/11.



American Photography presents on the following pages an account of the symposium on photography organized by Edward Steichen at the Museum of Modern Art. The participants included, in addition to Mr. Steichen, ten outstanding photographers of the New York area.

WHAT IS MODERN *Photography?*

A Symposium at the
Museum of Modern Art
November 20, 1950

**from
Edward Steichen's introduction**

Photography is an important and potent factor in shaping our knowledge and increasing our understanding of contemporary life. I believe its influence cannot be overstressed . . . And then, in particular, I stress the importance of photography as an art, as a vital modern means of giving form to ideas. It is the artist in photography who beyond his own creative achievement establishes standards, produces new influences and new uses of the medium . . . Our first large exhibition at the Museum was called "In and Out of Focus," with the following paragraph as a preamble, "Any rational opinion or evaluation of the scope and significance of today's photography must be based on an informed approach exploring the various tendencies and directions and phases of contemporary photography." All of the exhibitions that we have had to date have been more or less along those lines. This symposium tonight is in a sense carrying on that same idea.

NOTE: The Museum of Modern Art, 11 W. 53rd St., New York 19, is considering the publication in full of this symposium. Details will be announced in these pages or may be obtained directly from the Museum.

Walter Rosenblum provides a discussion and a criticism of an important recent discussion of photography:

No one who was at the Museum of Modern Art on Friday evening, Nov. 20, will hereafter underestimate the power of the photographic medium. More than 500 people filled the auditorium to hear 10 of the country's leading photographers attempt to answer the question, "What Is Modern Photography?"

To add to the excitement of the discussion itself, the entire proceedings were being recorded for overseas broadcast by the State Department's Voice of America as well as being transmitted as a live program by New York City's own station, WNYC. The audience boasted as many celebrities as did the platform, for literally a who's who in American photography was present.

Participants in the symposium will have a chance to speak for themselves in the adjoining section containing excerpts from their speeches. I would like to present here some of the impressions I received in the course of the evening.

The dictionary defines the word modern as "of or pertaining to present and recent times; not ancient or

Photograph copyright by Life, used by permission of the editors



Margaret Bourke-White

. . . If the photographer is going to tell the truth in his photographs he has to know what the truth is. And that's not always so easy to decide. With the world in the confused state that it is now in, I think that anyone who is in a position to throw light on even a small corner of it is in a position of great importance and very great responsibility. I think I never felt that responsibility more keenly than on my most recent assignment which was to South Africa . . . Discrimination between black and white is most acute . . . 2,000,000 who happen to have white skins manage to keep 8,000,000 people who are unlucky enough to have black skins in a position where they have no vote, where they have very little choice of jobs, where they are not given much chance to get an education, where they are barred from skilled trades . . . But how to show all that . . . It was natural to begin in the gold mines . . . under Johannesburg . . . at a depth of 6300 feet . . . It wasn't only the work these people did that was important but the lives that they lived when they weren't working . . . the men lived behind barbed wire and were locked in at night and had to sleep on hard cement floors, 45 to 100 in a single windowless room . . . and had to live without their women. I tried to take pictures to show this . . . I decided it wasn't just the single picture that counted . . . if the photographer knows the truth he thinks of it perhaps in terms of a mosaic . . . In photography our tools grow and our whole conception of what we can show grows and as we grow our pictures improve and we grow to be bigger people and can show more in photography because photography is as big as life itself.

Ben Shahn

Modern photography, I think, is photography taken now, as photography in 1935 was modern photography then and became old hat . . . only if it was bad. If it is good it is timeless. I could . . . talk about what is bad photography . . . but it is difficult to talk about what is good photography . . . Photography . . . is a matter of communication in human terms and mostly in human subjects, and I have set this very simple problem for myself, of showing humanity in those terms that interest me and in the clearest way . . . I worked with a Leica because I could carry it around most easily . . . And because I think it is a means of communication I have probably a very slight interest in what is called print quality. I have found a picture taken at f/64 will reproduce on a 60-line screen about the same way as one taken with a Leica or another miniature camera . . .



Photograph for April 1, 1950 cover, *Vogue*, copyright Condé-Nast

Irving Penn

Modern photography is probably nothing more than the work of a sound contemporary creative photographer . . . It is not a style. The modern photographer stands in awe of the fact that an issue of *LIFE* magazine will be seen by 24,000,000 people. It is obvious to him that never before in the history of mankind has anyone working in a visual medium been able to communicate so widely. He knows that in our time it is the privilege of the photographer to make the most vital visual record of man's existence. The modern photographer, having . . . the urge to communicate widely is inevitably drawn to the medium which offers him the fullest opportunity for this communication. He then works for publication, he has become in fact a journalist. He communicates the look of a war battlefield, or the look of a movie actress, he informs his readers of the new twist of a hipline in a dress collection. He studies the tribal rites of African natives and then publishes his documents in a small-edition book. Or he makes a photograph that sells soap. Whatever vehicle he chooses, for the modern photographer the end product of his efforts is the printed page, not the photographic print. The technical limitations of his medium are the limitations not of his sensitive photographic material but the limitations of the reproductive process by which the printed page is made . . . It is in the human and emotional realm, that the modern photographer has become especially skilled. His personal evolution has heightened his ability to experience people and objects . . . The modern photographer does not think of photography as an art form or of his photograph as an art object. But every so often in this medium, as in any creative medium, some of the practitioners are artists. In modern photography that which is art, is so as the by-product of a serious and useful job, soundly and lovingly done.

remote." A glance at the newspaper headlines (as modern as modern could be) on the evening of the symposium reflected a world in great turmoil. Our "modern" epoch is, if anything, characterized by supersonic developments in world events. War or peace, civil liberties and the atom bomb are phrases that go to the very heart of our existence as a civilized nation.

The photographer who is confronted by such an awesome historical moment must have a basic philosophy to help him integrate, understand and then reflect through his art the world in which he lives. When we analyze and understand some of the basic concepts which were presented by the panel of speakers, we have a clear picture of what is happening in contemporary photography.

Photo-journalism was the theme that dominated the discussion, seven of the 10 speakers being active workers in the field. Irving Penn summed up their viewpoint most cogently when he said, "The photographer no longer works for the single print, but for the magazine page with its millions of potential readers. It is obvious that never before in the history of mankind has anyone working in a visual medium been able to communicate so widely."

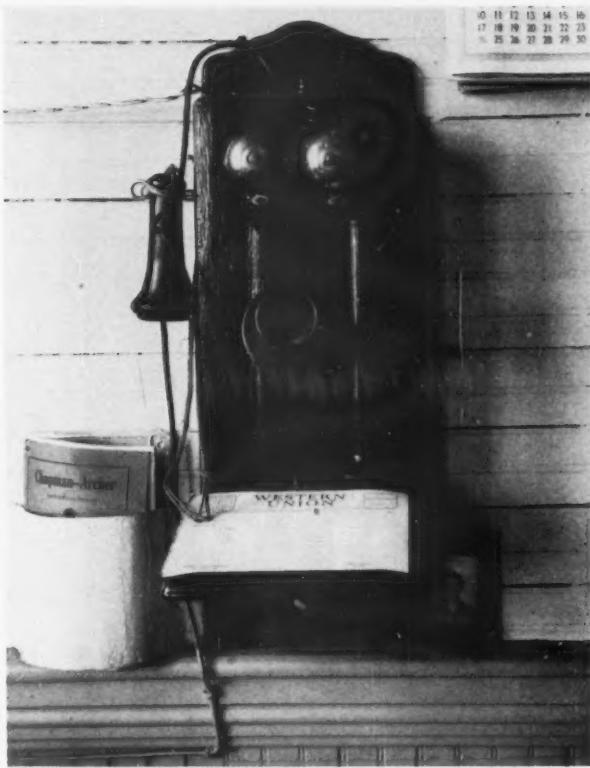
However, in this positive statement, as well as in those made by the other speakers, no effort was made to discuss the many problems that confront photo-journalists today. If you were to examine the careers of most of the photographers working for picture magazines, it would become sadly evident that the editorial policy of the publication has too often replaced any independent investigation by the photographers themselves. Picture magazines are big business, multimillion dollar corporations, whose aim is to promulgate certain policies and aims held by the publishers. These policies

filter down through the shooting script of the picture editor and the research of the editorial assistant. The brain and soul of the man behind the camera receives very little consideration.

The question which was avoided at the symposium is how the photographer can assert his own individuality when facing the demands of his "modern" employer. How best can the photographer carry on a struggle to certify that his assignment will coincide with his own point of view? How can he fight back when his pictures are misused and distorted to fit in with some previously conceived editorial layout? These questions probe through to the very heart of the problem facing the photo-journalist. By avoiding their discussion, the participants in the panel failed in their obligation both to themselves and their audience. They failed to understand that, to develop and grow, the photographer must constantly revitalize his work by a continuous investigation of the nature of reality on his own terms and through his own vision.

The insipid quality of so much of contemporary photo-journalism proves that the lack of any such forthright approach is injurious to creative development and will negate the possibility of any sincere photographer-audience relationship.

Also noticeable by its absence in the discussion was the problem of censorship. It isn't a secret that photographers are finding it more and more difficult to photograph because of the tense situation in world affairs. A young photographer was recently given a university grant to make some photographs in a small mining or mill town in Pennsylvania. His object was to live with the townspeople for a while, photograph them at home and at work, and after the pictures were printed, have an exhibition at which

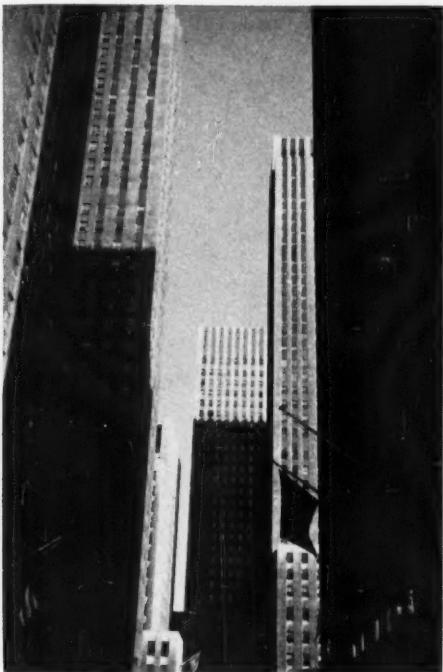


Wright Morris

. . . Ten years ago, when I was off hunting myself, a man in back of me at the edge of a corn field fired a hail of singing buckshot over my head. He missed me, but he hit what he was aiming at. He was aiming at the fellow who would invade his privacy . . .

As I believe that a great photograph, by definition, is the invasion of the privacy of something . . . how can this invasion be justified? . . . The presumption under which I labor is that I am something of an artist . . . but not that the invasion of privacy is a form of art.

The things that interest me photographically are those that speak for themselves . . . I confine myself however to the language that I think I understand . . . which is spoken by houses and the things that are handled by men, manhandled as a rule and worn out. These things are a species of photographs in themselves, the tool that bears the imprint of many hands, the bed that holds the impression of many bodies, and the house that wears like an album, the look of the inhabitants. Upon these things as on a photographic plate man has left the impressions that I find both revealing and eloquent. They may need a witness but they do not need an interpreter.



Charles Sheeler

... As a means of personal expression, it [photography] is only limited by the caliber of the operator . . . The photographer is more and more free to move around in the larger world which has been offered to him . . . There is a tendency to think that painting and photography are converging roads, that photography is a short cut to an equivalent in painting. This could bring us back to the bromoil which hoped to be a crayon drawing. Why make the same mistake again when there are so many new ones that can be made? There is a tendency in current abstract photography to disguise the source, nature, by using unidentifiable forms. This is to encroach upon the field of painting. It is . . . within the province of the photographer to seek . . . underlying abstract structure, and having found it to his satisfaction, to record it with his camera with an exactitude not to be achieved through any other medium. The result is an image which has passed through a lens and having been projected upon a sensitized emulsion makes an unalterable record of the thing seen.

the people whom he photographed would have a chance to discuss the merit of the work and the success of the photographer in reflecting their lives through his camera.

He found it impossible even to begin to photograph because the mine and mill owners, supported by the police, were so afraid of what they called "communism and sabotage" that they denied him the necessary permission. If he had gone ahead on his own, he would have been thrown into jail. There was no question of security involved. This was an arbitrary imposition of censorship.

Can there be any doubt that to withhold the right to photograph is as much an attack on the Bill of Rights as any infringements of the rights of free speech? And isn't it also clear that photographers should be the first to speak up against this new censorship? The symposium at the Museum would have served as a fine springboard for such a protest.

The bright spot of the symposium was the impromptu speech of W. Eugene Smith, the *Life* photographer, who spoke up during the discussion period. It is commonly agreed by his fellow photographers that Smith represents photo-journalism at its best. His own personal honesty is married to the most eloquent photographic perception. His work in the last war, the stories for *Life*, his struggle for the right to express his own point of view in his published work are practically legendary.

Smith spoke in answer to Wright Morris, who in the discussion period had said that there should be limits placed on the right of the photographer to invade the privacy of the public, the same way in which curbs are being placed on the rights of free speech in the United States today. Smith answered that you can't discuss the invasion of privacy unless you

discuss the specific instance and the reason for it. As an example he told how he had "invaded the privacy" of a wounded soldier on the battlefield because what he had to say about the GI, and in a larger sense, about the horrors of war, transcended the possible hurt or misunderstanding of the moment.

In his "Country Doctor" story, the people he photographed never objected to the invasion of their private lives because they recognized the photographer as an ally in their fight for adequate medical attention.

"*Life* has 24 million readers," Smith said, "and I am responsible to each one of them for what I do and for those pictures of mine which are published." As he spoke, one could feel a spark traveling through the audience, a spark which ignited tremendous applause when the statement was completed. Here was a photographer who felt a deep responsibility to the people he photographed as well as to the audience which would see the finished work.

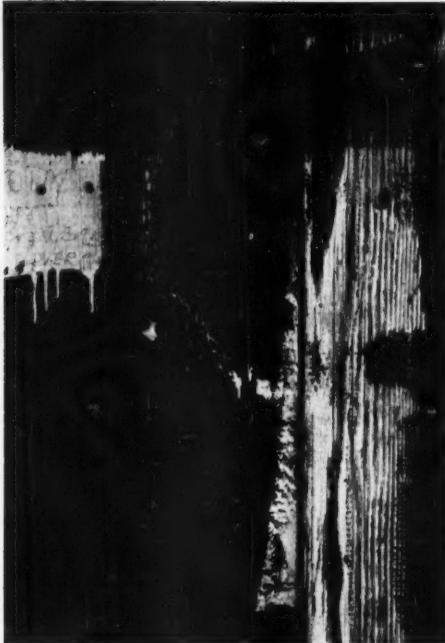
In but a few words Smith was able to explain what motivated him as a creative artist. This was not true of most of the other speakers with more time at their disposal. From the viewpoints expressed, it was as though the word "modern" could be summed up in the titles of Steichen's exhibitions, "In and Out of Focus" and "The Exact Instant." The question of form and content was completely divorced from the philosophy of the artist who produced the work.

Lisette Model called photography the art of the split second. But doesn't this put the cart before the horse? The history of any art form proves that you can never discuss how a picture is made before you talk about why it is made. Soft versus sharp photographs, movement arrested or blurred, the exact instant of a Cartier-



Homer Page

I have felt some responsibility to talk a little bit tonight about the new directions that young so-called documentary photographers are taking. I think these directions are important . . . In general, I think, there has been a trend away from the old documentary standby of objective reporting toward a more intimate, personal and subjective way of photographing . . . There are two trends . . . one trend has a positive note . . . it records life as healthy, vigorous and even sometimes humorous. It does this without being insipid. I think it's something new and welcome in this field which has been criticized so often for photographing despair and deprivation . . . I think two people particularly, Ruth Orkin and Tosh Matsumoto, are important here . . . The other trend leads off, I think, in the opposite direction. These people are breaking up their images—they are concerned, I think, not so much with the "what" of life, but with the "why." They ask questions rather than answer them . . . Louis Faurer is very good and representative . . . Both of these trends . . . are healthy. The first is overly so and the second because it records the turmoil and perhaps confusion that we all feel to some extent in this world today . . .



Aaron Siskind

When I make a photograph I want it to be an altogether new object, complete and self-contained, whose basic condition is order, unlike the world of events and actions . . .

The business of making a photograph may be said, in simple terms, to consist of three elements: the objective world (whose permanent condition is change and disorder), the sheet of paper on which the picture will be realized, and the experience which brings them together.

First, and emphatically, I accept the flat plane of the picture surface as the primary frame of reference of the picture. The experience itself may be described as one of total absorption in the object. But the object serves only a personal need and the requirements of the picture. Thus, rocks are sculptured forms; bits of shattered glass clinging to a window frame, a totem; the top of a tenement newel post, a terrible mask; sea weed bothered by a wave, a figure with its convoluted gut in plain view; a section of common decorative iron work, springing rhythmic shapes; fragments of paper sticking to a wall, a conversation piece . . . And these forms, totems, masks, figures, shapes, images, must finally take their place in the tonal field of the picture and strictly conform to their new space environment. The object has entered the picture, in a sense; it has been photographed directly. But it is often unrecognizable; for it has been removed from its usual context, disassociated from its customary neighbors and forced into new relationships.

However, I must stress that my own interest is immediate and in the picture. What I am conscious of and what I feel, above all, is the picture I am making, the relation of that picture to others I have made, and more generally, its relation to others I have experienced.

Bresson contrasted to the timelessness of a Weston—these things are meaningless if separated from what the photographer is trying to do, the reason for his creativity. The artist's intention precedes the manner in which he will create. So much of contemporary photography is meaningless because empty tricks of focus or movement have been substituted for a well developed reservoir of experience, which gives birth to the philosophy of the artist and is the underlying wellspring of any creative production. It is as though one were to discuss the sentence structure used by Balzac in the *Human Comedy* while ignoring its meaning.

A more thorough exploration of these problems could have been accomplished if the symposium had been planned a little more carefully. "What is Modern Photography" proved to be too big a topic for the five minutes allotted to each photographer. It would have helped to limit the panel to three or four persons, with one of these a photography critic or an art historian. The latter, familiar with man's search for creative expression through the ages, would be in a good position to evaluate contemporary expression.

Mr. Steichen, who was responsible for this symposium, has, in his exhibition policy at the Museum, attempted to explore the nature of the photographic medium in all of its varied aspects. This policy, extended to the field of discussion and symposia, could go far towards coalescing photographic thinking in this country and could serve as a valuable guide to the young photographer trying to find his way to creative expression. Further symposia would make an important contribution to the development of the photographic media.

Gjon Mili

There is no such thing as modern photography. There is photography and there is the lack of it . . . I am concerned in my own pictures with movement because life is movement . . . When a photograph does not express movement it ceases to represent life—it becomes, to me at least, meaningless.

I was assigned to the Louis-Walcott fight . . . When Louis was knocked down I was ready for it and caught it dead on . . . But looking at the photograph in retrospect we are able to discern, for instance, who are wholly unconcerned . . . who are shouting, the ones who are twisting with anxiety and the ones who are shocked by what has happened. Each face tells its own peculiar story, and by a thousand acute recorded details we are able to reconstruct, almost at a glance, this overpowering emotion which is released by the spectacle of a public fight. This, then, arresting movement, capturing the precise instant which can create by means of a snapshot an enhanced meaning for a whole event or human action, constitutes in my opinion the true, timeless province of photography.

Walter Rosenblum, whose discussion of the evening's work accompanies these quotations, is one of America's outstanding young photographers and an astute critic of the medium. He has a long record of successful work behind him, a number of one-man shows and pictures purchased by museums, and is now instructor of photography at Brooklyn College.



—Jerome Liebling

AMERICAN PHOTOGRAPHY acknowledges its thanks to the participants in this discussion who checked quotations and provided the examples of their work which accompany them. Special thanks must go to Miss Betty Chamberlain of the Museum staff, who went to considerable trouble to make our account complete.

Walker Evans

. . . I don't see how anyone can be interested in a photograph that isn't either original or daring or beautiful or somehow of unalloyed coinage—and I choke on the word "modern" used in connection with these qualities. All photography is the product of a modern invention and we all know that some of it is festering with attitudes and states of minds that were valuable in the time of Alcibiades . . . In the 1920's and somewhat before, modern meant atonality and cacophony in music, abstractions and various distortions in painting, incommunicable subjective imagery in poetry and automatic writing in prose. Yet we were stimulated by Schoenberg and Stravinsky, Braque, Modigliani, Crane and Stein because they were artists not because they were freaks trying to traffic in something called modern. In photography I do feel that a good picture usually shows a relation to its period. Atget, for example, gives you the feeling that he belongs very much to the Paris of his day and Brady seems rooted in the American atmosphere of his . . .

Lisette Model

Two tendencies dominate the field of photography today: one full of artificial subterfuges, glamour fantasies and hysterical drive for what is called shock appeal, the other striving for realism, sincerity and truth . . . The camera is a means of detection, it shows not only what we already know, but can explore new aspects of a constantly changing world. New images surround us everywhere. They are invisible only because of sterile routine convention and fear. To find these images is to dare to see, to be aware of what there is and how it is. The photographer not only gets information, he gives information about life. What is more, the information is given on a mass scale. The camera works fast, and so does the photographer. Within the second he has to see and to feel, to understand and to select, to react and to act. Movement and expression unseen before is stopped. A moment is captured that never was and never will be again. Speed, the fundamental condition of the activities of our day is the power of photography, indeed the modern art of today, the art of the split second.

THE WAR



Grief

Department of Defense

An infantryman comforts another whose buddy has just been killed, while a corpsman fills out casualty tags.

The five prints reproduced on these pages are from a group of prints recently released by the Department of Defense. Taken by Marine, Navy and Signal Corps photographers in Korea they demonstrate the courage and photographic skill of combat cameramen.



Shuttle

Sgt. Frank C. Kerr, USMC

Marines transported by truck to meet attacks on our lines.



Destruction

United States Navy

A church stands in the distance, unharmed despite the devastation of bombardment all around it.

IN KOREA

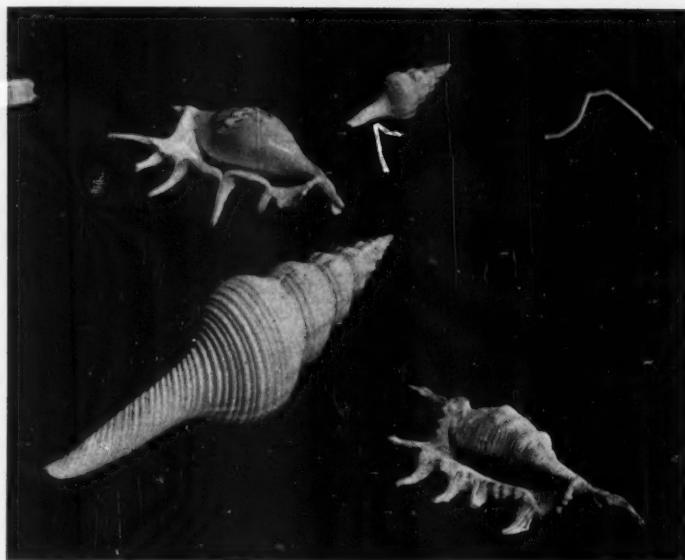
Weary
Department of Defense

An artilleryman rests during a lull in the fighting near Taegu, last July.



Invasion
Walter. W. Frank,
SSgt. USMC

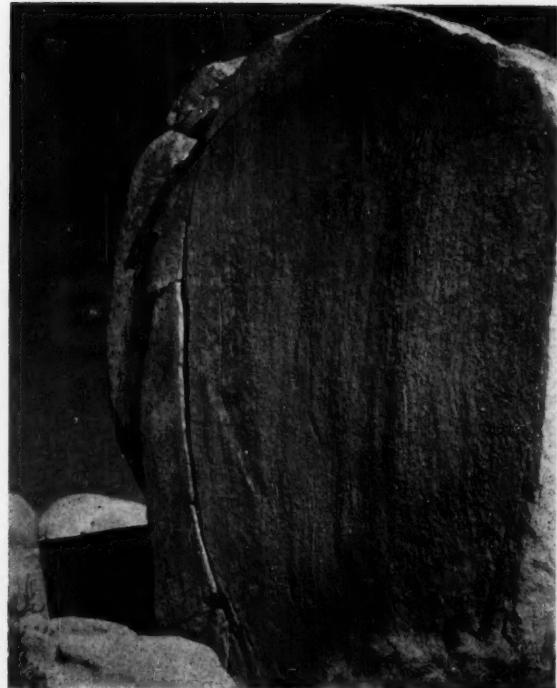
Marines scale ashore at Inchon in September's amphibious invasion.



Shells

Dody

AMERICAN PHOTOGRAPHY introduced the work of Dody to you in the January issue. Present here are four more examples of her work. After a two-year apprenticeship with Edward Weston, she is now working with Ansel Adams and free-lancing with both a Rolleiflex and a view camera. These are contact prints reproduced the same size as the original.

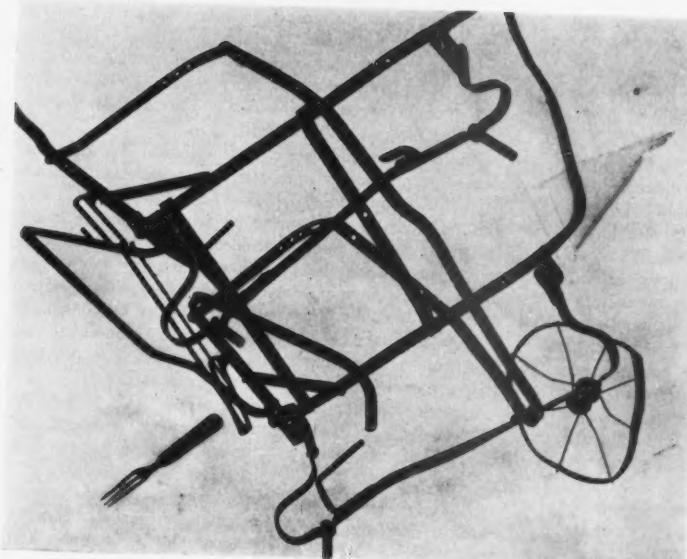


Desert Rocks

Dody

Glacier Polish

Dody



Baby Carriage Frame

Dody

SPEEDLIGHT

by Andrew F. Henninger



4. HOW TO BUILD IT (part one)

MANY PHOTOGRAPHERS are solely interested in the practical use of speedlight for taking pictures. Others want to know how and why speedlight works, as this new electronic light source appeals strongly to their scientific curiosity. After obtaining bits of information from various sources, this group will gradually acquire sufficient confidence to handle their own servicing problems if they should arise.

Later, as their knowledge of speedlight expands, they will plan and execute modifications of their equipment, such as adding another light or perhaps another capacitor to increase the power. A surprisingly large number of this group have even successfully constructed speedlight units to fit their particular needs. This frequently has been accomplished under very adverse circumstances, as many speedlight components are specially made and difficult to obtain in single lots.

Actually, speedlight isn't complicated and a reasonable investment of time and concentration will reward you with a good working knowledge of its principles, operation and construction.

If you already have some electrical and radio knowledge, the symbols used in speedlight circuit diagrams will seem like old friends, and you will quickly learn the technical aspects of this specialized field. If you do not have this previous knowledge, it may be necessary to reread several times the slightly technical portions that follow. The going may be a little rough at times but by all means continue, and soon all parts of the mental jigsaw puzzle will fall into an understandable pattern. It will be worth while to acquire at least a nodding acquaintance with electronics as it will be frequently useful in other than speedlight applications. Every possible effort will be made to present only the salient points of the subject so that the information you acquire will be practical and useful.

Basically, an electronic flashunit comprises a source of electric power such as an ac line or a battery, a transformer for stepping up or increasing this voltage, a recti-

The first step in building an electronic flashunit is to learn the component parts and why they are necessary to the operation. Andrew F. Henninger, from a long engineering background, here explains the essentials of the circuits in a manner which will be understandable to any reader, even one completely without technical training. There are from five to seven principal parts to any circuit. Here they are; this is how they operate; this is why they are necessary.

In next month's installment, specific directions for assembling the necessary parts will be given, as well as the exact description of the required materials.

fier to convert this alternating current to direct, a condenser or storage capacitor for storing the electrical energy and a gaseous conduction lamp for converting this electrical energy into light. A portable battery-operated flashunit also requires a vibrator, such as commonly used in automobile radios, to interrupt this current so that it can be stepped up by the transformer. In addition, both ac and portable flashunits require a means of flashing the light at the instant when the shutter is open.

Two methods are in general use to permit the light to be flashed in synchronization with the camera shutter.

One method employs what is generally known as a "trigger-type" flashtube. In this case, the energy from the storage capacitor is connected at all times to the flashtube. Flashing is accomplished by impressing the voltage from an ignition coil to a wire interlaced between turns of the lamp spiral. "Zero delay" contacts built into the camera shutter are required to synchronize a unit of this type unless a relay or other means is employed to introduce the necessary time delay to match flash shutters designed for use with flashbulbs.

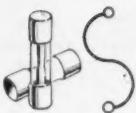
The other method uses a "self-ionizing" flashtube that flashes automatically when the energy from the storage capacitor is applied. To make this connection between storage capacitor and lamp an electrically operated switch known as a relay is used. It could really be called a remote control device because by applying to it low voltage and very low current, a separate and completely isolated circuit of higher voltage and current may be controlled.

Now, let's take each of these parts, or components that constitute a speedlight unit and see what they do, how they are constructed and why they are used.

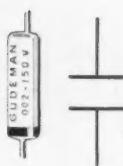
First to consider is the power supply. This is the 110-volt, 60-cycle ac line in the case of an ac speedlight and a small battery—usually of the storage type—in the case of a portable.

Two two-volt cells of eight ampere hours capacity are usually employed. They are connected in series to provide four volts. The weight is approximately two pounds, and

FUSE



SMALL CAPACITOR



4 CONTACT SOCKET



2 CONTACT SOCKET



COMPONENT PARTS AND THEIR SYMBOLS

the dimensions are $4\frac{1}{4}$ inches high, $3\frac{3}{8}$ inches wide and $2\frac{1}{32}$ inches deep, including the ball columns, which act as charge indicators.

The energy in the storage capacitor, which is eventually discharged through the lamp, is always of a higher voltage than that of the original power supply, so it is necessary to transform, or "step up," this voltage to the required value. This is easily accomplished with an alternating or ac supply as we can apply it directly to a transformer. Never connect a dc line or battery directly to a transformer; it will be very unhealthy both for the transformer and the power source.

Portable speedlights using a battery power supply always have an additional component known as a *vibrator*. It is quite similar to the type used in an automobile radio except that the driver coil is wound for four-volt instead of six-volt operation. The function of the vibrator is to interrupt, or "make and break," the connection between battery and transformer so that the voltage may be stepped up to the required value. A vibrator is usually enclosed in a cylindrical aluminum housing measuring $1\frac{1}{2}$ inches in diameter by two inches in length. Base pins are provided for making connection and mounting in a standard radio tube socket. Inside is a thin steel reed and sets of tungsten contacts. A small electromagnet causes the reed to vibrate and perform the required "make and break" action.

By consulting the block diagram, you will see where the vibrator fits into the circuit arrangement. A picture of a vibrator is also provided so that you will recognize one at first meeting. Along with the picture is the elec-

tronic symbol, and to this and other symbols to follow you should apply your concentrated attention as they will be encountered in all schematic circuit diagrams.

Consult the block diagrams again for the location of the *transformer* in the speedlight circuit. This component comprises many layers of insulated copper wire in two separate circuits. One of these circuits is called the *primary* and the other the *secondary*. If it is a step-up transformer as used in a speedlight, the secondary will have many more turns of wire than the primary. In fact, there is a very direct relationship between the primary voltage, the number of turns of wire in the primary, the number of turns in the secondary and the secondary voltage.

To illustrate, let us imagine a transformer with 100 turns of wire in the primary and 500 turns in the secondary. This gives us a "step up" ratio of one to five, and if we apply 110 volts ac to the primary, the secondary voltage will be five times that applied to the primary, or 550 volts. Now, suppose we want a source of low voltage—say two volts—for the heater of a hot cathode rectifier tube. A "step down" ratio of 55 to one will be required and another secondary of 1.8 turns of wire on the same transformer will give us the required two volts. This is just to give you a rough idea of the basic principles involved. Several other factors are involved in transformer design, and it is always best to buy a factory-made product having the desired characteristics rather than attempt its construction.

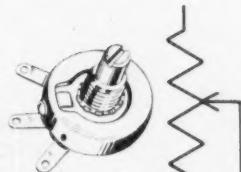
Because of high voltage peaks, the storage capacitor will charge to a dc voltage about 40 percent higher than

COMPONENT PARTS AND THEIR SYMBOLS

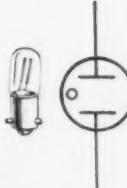
RESISTOR



RHEOSTAT



NEON LAMP



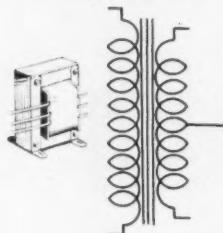
INDICATING LAMP



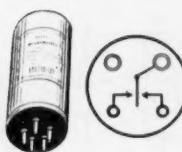
RECTIFIER



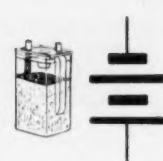
TRANSFORMER



VIBRATOR



BATTERY



COMPONENT PARTS AND THEIR SYMBOLS

the ac secondary voltage of the transformer. A simple formula for determining the final dc voltage after rectification is:

$$\text{ac voltage} \times 1.4 = \text{dc voltage}$$

If you plan to do much work in the servicing and construction of speedlight units, you will need some test equipment. Simpson Model 260 volt-ohm-milliammeter, available from most radio supply houses for about \$36, will enable you to make almost any test that will ever be required. It will measure both ac and dc voltage from 0 to 5000 V. Resistance can be measured over a range of from 0 to 20 million ohms. (20 megohms). Current in dc circuits can be measured from 0 to 10 amperes. Most radio service men have this instrument and would be able to make any necessary tests for you if you do not wish to purchase one.

Another look at the block diagram shows that the ac voltage from the transformer secondary passes through a *rectifier*. The purpose of this component is to change the ac voltage to dc so that it can be stored in the capacitor.

In a portable speedlight, we start with the four volts dc from the battery, interrupt it with the vibrator, step it up to a higher voltage with the transformer and then change it back to dc again with the rectifier. All this equipment is used for the sole purpose of raising the dc voltage to the required value.

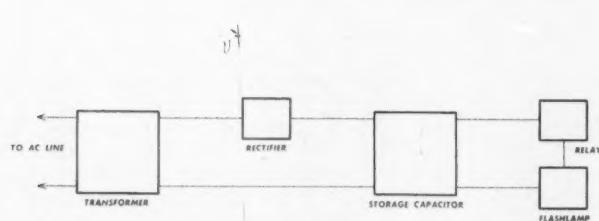
Several types of *rectifiers* are used in speedlight equipment. Of the electronic tube types, a cold cathode, gas-filled, miniature rectifier CK1013 is used in many portable units. It is considered preferable for this application because no additional battery current is required to heat a cathode and the unit will start charging instantly when turned on. With low and medium power ac units, a hot cathode, high vacuum rectifier tube, Type 2x2A, is a

favorite. High power ac units usually employ hot cathode mercury vapor rectifier tubes.

Dry disc rectifiers also are used in portable and low voltage ac speedlight equipment. While several materials will perform this function of permitting electrical energy of only one polarity to pass, selenium is preferred because each cell will handle a higher voltage without damage.

Three different rectifier circuit arrangements are used in the various types of speedlight units. Single wave rectification, employing one tube, is used in most low and medium power ac units. Higher power ac units have larger capacitors, and full wave rectification is employed to obtain faster charging time. This system requires a larger transformer having a center tapped secondary and two rectifier tubes. The charging time is twice as fast as with single wave rectification, and this advantage is obtained at an increase in weight, space and cost. Voltage doubling circuits are used in most portables. This system may use either two rectifier tubes or two dry disc rectifiers, and provides fast charging and low energy loss. An additional advantage is obtained because the rectifier equipment and transformer secondary may be of lower voltage rating.

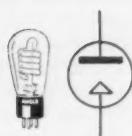
After passing through the rectifying system, the electrical energy is now both the proper voltage and dc, so that it can be stored in the *capacitor*. As an analogy, we could compare the *capacitor* to a water tank, the power supply to a pump and the electrical wiring to pipes, through which water is pumped into the tank. With the water tank, just as with the capacitor, there is a delay while it is being filled. In a speedlight unit, the electrical energy that has been stored in the capacitor over a period of time is discharged, during a very brief interval, through the flashtube. This produces the extremely bri-

SCHEMATIC DIAGRAM
OF AC SPEEDLIGHT

D.P.D.T. SWITCH



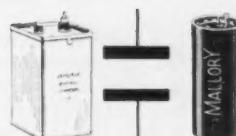
FLASHLAMP



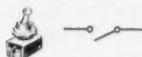
S.P.S.T. RELAY



CAPACITOR



S.P.S.T. SWITCH



COMPONENT PARTS AND THEIR SYMBOLS

lant flash of light you would expect, because of the high value of current involved.

Two types of capacitors are used in speedlight construction. Both are shown in the illustrations. The accompanying electronic symbol is the same for either kind, the identification being usually provided in the parts list accompanying most schematic circuits.

The type in most extensive use is generally referred to as an "oil capacitor." The construction comprises the use of two layers of aluminum foil separated by several layers of very thin, special paper having a minimum of impurities. A very considerable length of these materials is tightly rolled into a compact unit and after terminals for electrical connections are attached to the two metal foil portions, the entire unit is placed in a metal container, heated in vacuum, filled with a special oil and sealed.

The other type is called an "electrolytic capacitor." While the principle of operation is the same, there is a considerable difference in construction. In this case, the thin aluminum foil is first etched to increase the surface area and then, with a porous separator, rolled into a compact cylinder and placed in an aluminum housing. A conductive electrolyte is then added and the unit sealed. Next follows an aging process with electrical energy applied. This causes an extremely thin insulating film to form on the aluminum foil and act as a dielectric. The extreme thinness of this film makes it possible to produce a very high capacity in a small area. It, however, also has the disadvantage of limiting these capacitors to lower operating voltages, those in speedlight use usually being rated at 450 V.

Each of these types of capacitors is characterized by certain advantages and disadvantages. For example, the oil-filled type has practically no electrical leakage or internal discharge and will hold a charge for a considerable

length of time. Therefore, less electrical energy is needed to build up and maintain a full charge. This is important in a portable unit because it is one of the factors determining the number of flashes available from one battery charge.

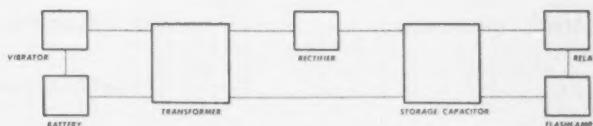
The leakage rate of electrolytic capacitors is quite high and a full charge will decrease very rapidly if there is a delay in taking the picture. The thin dielectric film also seems to deteriorate somewhat when these capacitors have not been used for a few days. The leakage is then quite high, the rate increasing as a charge is accumulated. Finally, the leakage rate equals the charging rate, and the capacitor will not accept any additional charge. Usually this stabilization point is reached at a voltage far below the rating of the capacitor, and if pictures are taken, they will be badly underexposed if the exposure time is based upon previous performance of the speedlight.

The remedy for this condition is to completely reform this film by continuously charging the unit for several minutes. An understanding of the performance characteristics of these capacitors will enable you to get consistent and reliable results from a speedlight which employs them. These capacitors have an advantage over the oil type in regard to size and weight, and lower power portables which use them are easy to carry and convenient to use.

The performance traits of a speedlight are very largely dependent upon the capacitor installation and it will be profitable to devote extra attention and time to a study of these components. The μf (microfarad) rating of the capacitors and the voltage to which they are charged determines the amount of energy in watt-seconds which are discharged through the flashtube.

There is a simple formula for obtaining the power of

SCHEMATIC DIAGRAM
OF BATTERY SPEEDLIGHT



a speedlight unit in watt-seconds:

$$\text{Watt-Seconds} = \frac{C V^2}{2}$$

where C is expressed in μf and V in kilovolts.

For example, let us consider a portable speedlight having a $20 \mu\text{f}$ oil capacitor charged to 2500 volts. This would be 2.5 kilovolts, squared to give us 6.25, multiplied by 20 to equal 125. Dividing by 2 will give the result as 62 watt-seconds.

Now, we will use the watt-second formula to determine the power of two flashunits using electrolytic capacitors. In the first one, we will use four capacitors, each of $165 \mu\text{f}$ capacity rated at 450V and connected in parallel as shown in the drawing. When capacitors are connected in parallel, the total capacity is the sum of the individual capacitances and, in this case, we will have a total capacity of $660 \mu\text{f}$, to be operated at 450V or .45 kilovolts. This .45 squared gives us .202 and $.202 \times 660 = 133$, which when divided by 2, gives us 66 watt-seconds.

Next, let us consider a speedlight unit using these same four electrolytic capacitors, but connected in series-parallel for 900V operation as shown in the illustration. When two capacitors of equal capacitance are connected in series, the total capacitance is one-half that of one, and the operating voltage is doubled. As we have two pairs of these series connected capacitances and the two pairs then connected in parallel, the total capacity would be $165 \mu\text{f}$ and the operating voltage would be 900V or .9 kilovolts. Squaring this and multiplying by $165 \mu\text{f}$ will give us 133 which, when divided by 2, will again give us 66 watt-seconds.

This is interesting, isn't it? We have shown that $660 \mu\text{f}$ charged to 450V will provide exactly the same energy output as will $165 \mu\text{f}$ charged to 900V. Let's investigate further to find out what difference there will be in the performance of these two speedlight units. The time duration of the flash will certainly be affected, as this is determined by:

$$C \times R = T$$

where C is capacitance in μf and R is average resistance in ohms of the flashtube during discharge, and T is the time duration in microseconds or millionths of a second.

Let's assume that the mean resistance of the flashtube is 4 ohms, which when multiplied by $660 \mu\text{f}$ as used in the first speedlight unit, will give 2640 microseconds or 2.6 milliseconds or 1/384 second.

The second speedlight, of the same power but using $165 \mu\text{f}$ at 900V, would have a time duration of $165 \times 4 = 660$ microseconds or .66 milliseconds or roughly 1/1500 second.

It would be a very good plan to take several arbitrary values of capacitance and voltage and, by using the watt-second and time duration formulas, determine the power and flash duration of imaginary speedlight units operating under these conditions. You will see the very logical relationship of all the factors involved and learn how to modify the operating conditions to provide special characteristics. For example, if you want a very short duration flash, $10 \mu\text{f}$ of capacitance charged to 4000V will provide 80 watt-seconds of energy and a flash duration of .04 milliseconds or 1/25,000 second.

A speedlight unit produces light when the accumulated energy in the storage capacitors is discharged through the flashtube. A flashtube is really a gaseous conduction lamp with a complete set of special characteristics, very different from the familiar incandescent or filament lamp. For example, the flashtube is an excellent insulator, or non-conductor of electricity until it is ionized. It will then pass an almost unlimited amount of energy, even sufficient to cause lamp destruction, if this much energy is available.

Most flashtubes employ a spiral of glass tubing which is filled with one of the inert gases, usually xenon. An inert gas will not combine with any other of the elements and is, of course, non-poisonous and non-combustible. Light is produced by ionization of the xenon atoms, and after the flash occurs, they are again in their original condition; nothing has been consumed or used except the electrical energy passing through the flashtube. The gas pressure in flashtubes is always considerably less than atmospheric, and if a tube should ever break accidentally, the glass will merely collapse inwardly.

More than one flashtube may be connected to the same capacitor if desired. Trigger-type tubes are always connected in parallel and require a separate high voltage transformer or ignition coil for each tube. Two self-ionizing flashtubes may be connected in series to the same capacitor and operate at extraordinarily high efficiency with this circuit arrangement as *all* the electrical energy passes through both tubes instead of being divided, as with the trigger type. The series arrangement has the additional advantage of having both tubes flash in *exact* unison so that photographs of high speed action may be made without obtaining double images.

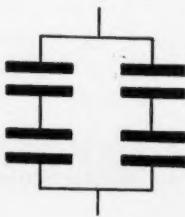
METHODS OF CONNECTING CAPACITORS INTO CIRCUITS



SERIES CONNECTION



PARALLEL CONNECTION



SERIES-PARALLEL CONNECTION

It is easy to add an additional light to a flash unit employing self-ionizing flashtubes. There are no basic circuit changes beyond connecting the extra flashtube in series with the present lamp and connecting a .25 megohm resistor across one tube and a $.0001\mu F$ capacitor across the other, as shown in the accompanying schematic circuit diagram. Both tubes will then operate as one without further attention. If the lamp cables are plugged into sockets, a "shorting out" plug should be inserted in the unused socket to bridge the circuit when only one lamp is used. A pair of self-ionizing flashtubes may be used with each capacitor, and both factory-made units and kits for ac and battery portable speedlights are available which employ one and two capacitors. With the latter it is possible to use from one to four lamps as desired and yet utilize all the stored energy each flash, regardless of the number of lamps being used.

Self-ionizing lamps, or flashtubes, always employ an electrically operated, remote controlled switch called a *relay* to close the circuit between lamp and capacitor. The relay employs an electromagnet to actuate an armature which causes contacts, insulated from the rest of the relay, to close and complete the lamp flashing circuit. The current used to close the relay is usually much less than that required for a flashbulb, and properly designed shutter contacts will give excellent results with this system.

The relay method also has the distinctive advantage of being usable with complete reliability on cameras equipped with solenoid shutter trippers.

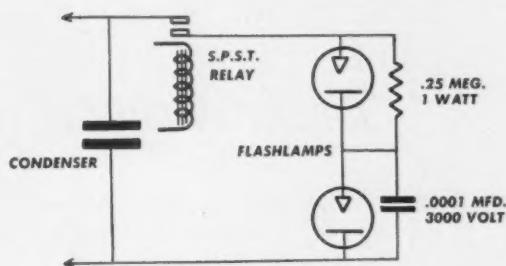
The contacts of a relay are operating under very favorable conditions when used to close the capacitor circuit to a self-ionizing flashtube. Remember, a flashtube has different characteristics than other light sources, and it is an insulator until ionized. This means that the tube will not flash until the relay circuit is closed, and then the flash occurs before the circuit can open again. Obviously, the relay contacts are both *closing* and *opening* under a no-load condition which is conducive to long contact life and reliable operation. The pressure contact made in the closure of this circuit is quite similar to those made in the flashtube socket and other locations in all types of speedlight units.

Low work function, or low resistance electrodes of rare metals, is one of the several developments required to enable a flashtube to perform as a self-ionizing lamp. These special low resistance electrodes enable the capacitor to discharge through the lamp in a shorter time, resulting in a more brilliant flash. Also, more energy from the storage capacitor is discharged through a flashtube having these low work function electrodes, than one without; a comparative voltmeter measurement of the capacitor after flashing will usually show an appreciably lower reading with the former.

"Low voltage" flashtubes, having two- and three-turn spirals are available with these special electrode materials, for operation at either 450 or 900 volts. While this voltage is too low to expect self-ionizing operation, they trigger very readily with tiny, model airplane ignition coils, and the efficiency, as one would expect, is extremely high.

Now, let's give some thought to any possible electrical shock hazard that may be present when delving into the "innards" of a speedlight unit. I have known of several cases where shocks were received from this source; all of

TWO SERIES CONNECTED SELF IONIZING LAMPS



them were due to carelessness. None resulted in a fatality, and those receiving them continued work without any ill effects, but with a very wholesome respect for electricity. You can work on speedlight units with perfect safety if you will learn to let your mind travel ahead of your hands and never touch a component that may be "live."

Be sure to turn off the power supply and discharge all capacitors when you are working where you are exposed to "live" terminals. Some workers discharge capacitors by short circuiting the terminals with a screw driver which has an insulated handle. This is an effective, though somewhat noisy method that isn't too good for the capacitor. A better way is to use a 1000-ohm, 5-watt resistor with insulated leads and clips attached. You may also leave it clipped to the capacitor terminals if desired and work with the comfortable assurance that the capacitor is harmless.

Don't be lulled into a false feeling of security by the term "low voltage" when it is applied to speedlight units using electrolytic capacitors. This is a misnomer used to distinguish units using electrolytic capacitors from "high voltage" types employing oil-filled capacitors. The "bite" from one is just as bad as from the other if you are careless; it is the power of the unit in watt-seconds that is important—not the voltage—where values higher than 110 volts are involved.

Thousands of photographers have successfully built their own speedlights, many with only a small portion of the foundation you will have if you have carefully read all the above. Our next project will be the actual building of a two-light battery portable, using a highly efficient, very advanced but simple, trouble-free circuit that has never previously been published. While not at all heavy to carry, the light will have a real "punch" and can be used for practically all lighting requirements.

If you wish to study the various types of schematic circuits for speedlights and see what components are used in their construction, a complete portfolio may be obtained for \$1 from the Amgo Corporation, 4234 Lincoln Ave., Chicago 18, Ill. They will credit the \$1 on your first order for any of the components used in making your own outfit.

For the pursuit of color

DIFFERENT subjects call for different treatments. That's why it's almost essential to carry one camera for black-and-white and another camera for color. Either the Kodak Pony 135 Camera or the Kodak Pony 828 Camera is perfect as an "extra camera" for color. Compact miniatures—modern in design—both have fine Lumenized Kodak Anaston f/4.5 Lenses corrected for color and definition . . . and Flash 200 Shutters with "synch" built in. It's a "lot of camera" for such a modest price. Whether you own one camera or five, the "Pony" is just right for color or wherever a miniature is desired. The "Pony 135" . . . \$34.75; the "Pony 828" . . . only \$29.95.



DETAILS: Lumenized 51mm. Kodak Anaston f/4.5 Lenses focus to 2½ feet; Kodak Flash 200 Shutters, 1/25 to 1/200 and "B," cocking type, lock until telescopic lens barrel is fully extended. Enclosed view finder. Body shutter release. "Average" Kodachrome settings marked in red. Pony 135, with automatic film stop and exposure counter, takes 35mm. (24 x 36mm.) film, 20 or 36 exposures; Pony 828, 8 exposures, 28 x 40mm. Kodak Flashholder with Flashguard for both cameras, \$11.50. Case, cable release, and lens attachments are other accessories available.

Prices include Federal Tax.





For captured color

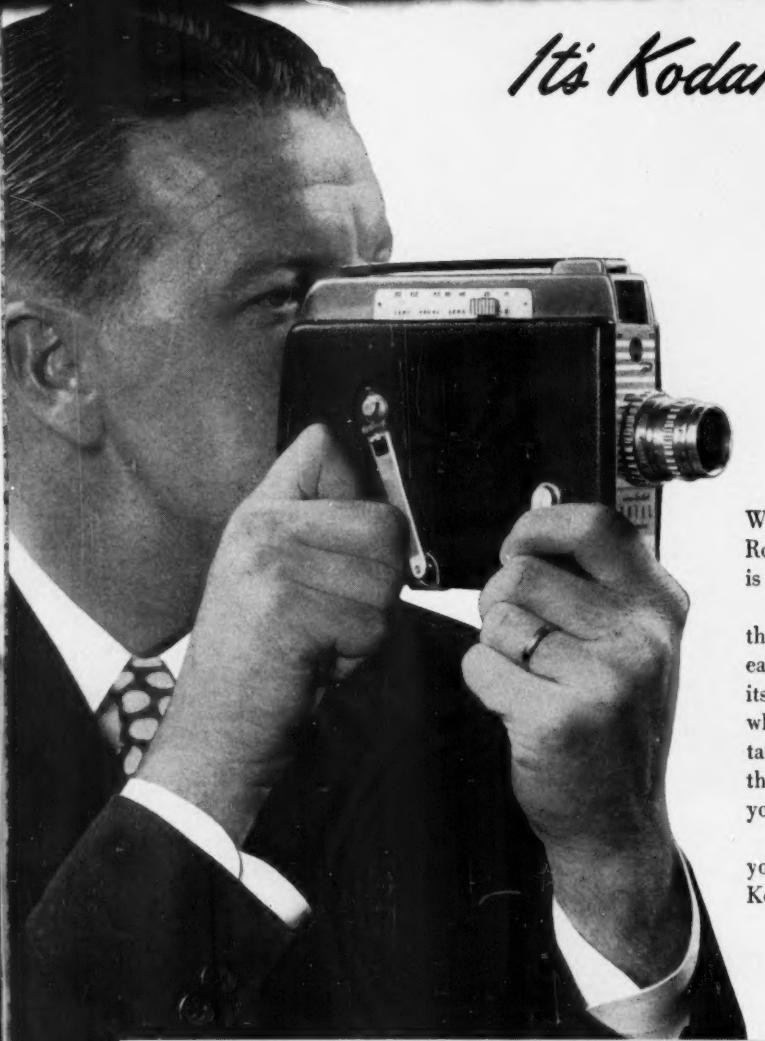
For the photographer who has a great number of color slides, the Kodaslide Table Viewer, 4X, is ideal for arranging and editing purposes. It's fine for taking those quick looks at certain slides without having to turn out the lights and set up projector and screen. Images are enlarged over four times in size. Pictures are radiant and sharp because of the new Day-View screen and fine optical system. Lens is the superb, three-element, Lumenized Kodak Projection Ektanon Lens, 50mm, f/3.5. Other features include: heat-absorbing glass for protecting transparencies; three projection mirrors; convection cooling; two condensers; and focusing knob. Operates on AC-DC, 100 to 125 volts. \$47.50.

CARRYING CASE is handy for carrying and protecting viewer. Made especially for the Kodaslide Table Viewer, 4X; viewer can be left attached to bottom section while in use. Case has long-wearing Kodadur covering and is finely fitted. Cover section has space for Kodaslide Compartment File and spare lamp. List Price, \$14.50.

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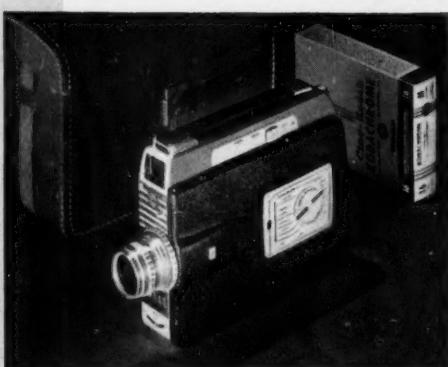
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FEATURES

Lens: Kodak Cine Ektar, 25mm. f/1.9 (Lumenized); focus scale—12 inches to infinity. **Speeds:** 16, 24, and 64 (slow-motion) frames per second. **Controls:** Three-way exposure release—run, continuous-run, or single frame; Cine-Kodak Universal Guide for proper exposure calculation; footage indicator; motor lock to prevent accidental exposure; speed-control setting. **View Finder:** Eye-level, enclosed; adjustable for standard, wide-angle, and telephoto lenses; parallax-correction indicators. **Loading:** Instant slip-in loading with 50-foot magazines of 16mm. Kodachrome or black-and-white film. **Motor:** Spring-driven, governor-controlled; single winding pulls 10 feet of film. **Construction:** Die-cast aluminum, with black morocco-grain Kodadur covering; fittings of brushed aluminum. **Size and Weight:** 6½ x 5¾ x 2 inches; 2½ pounds. **Accessories:** Choice of eleven accessory Kodak Cine Ektar and Kodak Cine Ektanon Lenses—from 15mm. f/2.5 (wide angle) to 152mm. f/4.0 (telephoto); Cine-Kodak Titler; Kodak Combination Lens Attachments; Cine-Kodak Compartment Case. **List Price:** \$192.50, including Federal Tax. Price subject to change without notice.



Kodak
TRADE MARK

BOOK REVIEWS

WARD, BALDWIN H., editor, *Year*, (Mid-Century Edition), *Year*, Los Angeles, Calif., 1950, \$6.95.

This is the most interesting edition so far of this enormous annual collection of news and documentary photographs. Slanting his work to cover the last 50 years, the editor has found over 2000 prints which do a surprisingly good job of conveying the flavor of our times.

One cannot go through this without being constantly reminded of the services of photography to the social historian and wondering what the advances of the next few decades will do to making the records for this new half-century even more complete.

The format of this book (like many others of its genre) creates something of a housing problem. Houses and apartments today do not have the old library table and finding a place for an 11x14-inch book is not easy. However, it offers a better page for displaying prints and a little exercise in juggling it will be good for the sedentary.

MUNDT, ERNEST, *A Primer of Visual Art*, Burgess Publishing Co., Minneapolis, 1950, spiral bound, \$2.50.

This is the best small primer of design which has yet seen print. Its author is director of the California School of Fine Arts in San Francisco and from this approach to organizing pictures it is easy to see why the course in photography offered there is one of the finest in the country.

The book is a workbook for actual experiment. It considers, in natural sequence, the problems of two-dimensional form in space and then the handling of pictorial material in terms of the basic insight which has been learned.

There are no mysteries of composition here, simply logical examination of basic design. No one can study this without profit.

SAMUELS, RALPH, editor, *Universal Photo Almanac* (1951) Falk Publishing Co., New York, 1950, \$1.75.

Now in its 15th year, this edition of the Universal Photo Almanac is the

finest so far. There is an unusually good array of writers and the subject-matter is broad enough to interest a large group. Among the authors of articles are Ansel Adams, Jacob Deschin, Minor White, Berenice Abbott, Beaumont Newhall and Lloyd Varden. In addition there is a condensation of the book *Photography Is a Language*, by John R. Whiting.

In addition to the articles, there is a portfolio of prints selected from the files of the Standard Oil (N.J.) photographic unit under the direction of Roy Stryker.

The market guide for photographers who wish to sell pictures (are there any who do not?) lists 650 buyers and their specific requirements. The formularey and data section has been revised and brought up to date by Lloyd Varden and Peter Kraus, both well-known technical authorities. This includes 77 pages of necessary information for the amateur.

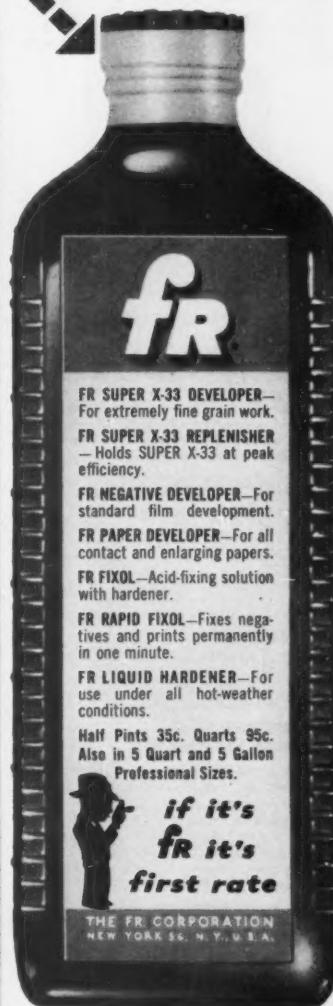
The opening article in the book is a note on "Contemporary American Photography" by Ansel Adams, discussing the current approaches. Brief as it is, it is a telling analysis of the contemporary situation and should be read by every serious photographer until he has it by heart—and in his heart.

There is a second article which will be of value to every advanced worker, an analysis of five prints by Minor White, head of the photographic department of the California School of Fine Arts. He picks one aspect of picture-analysis, the contrast between "closed form" and "open form" and discusses it in terms of specific pictures in a manner which makes discussion of "composition" seem sterile and obsolete.

Both the beginner and the advanced worker may find interesting material here—which is not always true in photographic publications. The only serious lack in the volume is the unfortunate lay-out of the pages. There seems to have been little intelligent consideration of the functions of the pictures or their respective importance with the text. This does not interfere with the value of the text, it merely makes it more difficult to read enjoyably.

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McCLUSKY, F. DEAN, *Audio-Visual Teaching Techniques*, William C. Brown Co., Dubuque, Iowa, \$2.75.

The author, an associate professor of education at the University of California, Los Angeles, presents here a sound account of audio-visual techniques in modern education. It is directed primarily to the user of pictorial material in the schools rather than to the producers of such material; however, there are a number in our readership who are concerned with one or the other of these problems and they will find an excellent account of the field in these pages. There is, in addition to the excellent section on theory and techniques of the use of visual materials, a wealth of practical advice on equipment types and their maintenance. There are lists of informational sources, of sources of materials and several charts on the use of movie projectors.

BRIGGS, W. G., F.R.P.S., F.I.B.P., *The Camera in Advertising and Industry*, Pitman, Chicago, 1948, 54 illus., \$5.

The text-matter of this book, written in England, is elementary but very sound. It is written from a practical viewpoint and covers a great deal of ground, including lighting problems, models and props, color, fashion, advertising photography. The author is especially good in his chapter on choosing equipment. Anyone who expects to buy professional equipment may read this chapter and come out a more shrewd purchaser.

Unfortunately, the pictures sadly fail the text. They prove, primarily, that British standards are far different from American ones. Few of these illustrations would be acceptable to an American advertising agency. Despite this, the student who is looking forward to working in commercial photography can learn much from Mr. Briggs.

BENNETT, H., editor, *The Chemical Formulary*, 9th edition, Chemical Publishing Co., Inc., Brooklyn, 1950, \$7.

This volume is a supplement to the eight which have preceded it. Each book represents an accumulation of additional formulas, rather than a complete survey of the various fields. This volume, like the previous ones, includes everything from formulas for face-cream to dyeing cloth. The new formulas in the photographic section include a number of interesting toning solutions which look promising.

HODGMAN, CHARLES D., editor, *Handbook of Chemistry and Physics*, 32nd edition, Chemical Rubber Publishing Co., Cleveland, 1950, \$15.

This is the bible of the research worker, now out in a new, revised edition. It provides the most complete collection in print of tables in mathematics, physics and chemistry—totaling 2879 pages. There are more than 50 pages in the "Photographic Formulae" section, and many of the entries are difficult to find in the ordinary literature. There is also a full section on light which includes all the optical formulas and tables necessary for lens work.

The average worker will find that much of the material is beyond his needs, but anyone doing advanced work will find here the facts of science which he requires.

Stains on Negatives and Prints. Rochester, N. Y.: Eastman Kodak, 1950. 25 cents.

The original article, by J. I. Crabtree, on which this is based appeared in the *American Annual of Photography* for 1921 and was subsequently issued as a *Kodak Data Book* in 1941. It has long been out of print, but has never lost its value—as the dog-eared condition of the '41 edition in this reviewer's library will indicate. This new edition is revised and expanded, with additional illustrations, and gives as complete instructions as are available anywhere for preventing or removing stains from film and paper.

Also recently added to the Data Book series are: *Kodachrome Films for Miniature and Movie Cameras* (35 cents cash) and *Kodak Flexichrome Process* (50 cents).

If you should like to add any of the books reviewed in these columns to your personal photographic library, write to Book Department, American Photography. This publication has either been authorized to distribute these books or will forward your order to the proper organization. Address:

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DUNN, CARLETON E. *Natural Color Processes*. Minneapolis: American Photographic Publishing Co., 1950. \$5. This is the fifth edition, completely revised, of the most complete and detailed manual of color processing in print. Mr. Dunn is a demonstrator in color techniques to the graphic arts industry and has a complete command of the actual processes. The instructions given here are the result of actual practice and are consequently of the greatest value to every photographer who works with color.

He begins with a short introduction to color theory, then describes in complete detail the various methods of making properly-balanced separation negatives. There is a full description of Autotype Trichrome Carbro, of Kodak Dye Transfer, of Colorograph Tricolor Pigment and of Gasparcolor printing. The Eastman and Ansco processes are described as is Dufaycolor, and a final chapter details the Flexichrome procedure.

This is a practical, working manual. Its value is attested by the rapidity with which the preceding four editions were sold out.

Caught in the Act, (Great Pictures Taken by Surprise), Picture Press, New York, 1950, 50 cents.

Shots from this book have been widely syndicated in the newspapers lately, bringing to a wide audience examples of the hilarious collection within these 64 pages.

The camera is frequently on hand when human beings are exhibiting their most ridiculous side and the editors of this new publishing house have managed to find a goodly number of them. Incidentally, readers who feel that they have pictures as humorous are invited to send them in for consideration for a forthcoming second edition. The fee for this use will be \$25 and full particulars will be found in the book.



Rosanne, 4, who is generally a well-behaved little girl, got fed-up when her father, Edward Clarity of the New York Daily News, spent hours posing her sister in a confirmation dress. Rosanne wanted some attention, too. (From Caught in the Act, reviewed here.)

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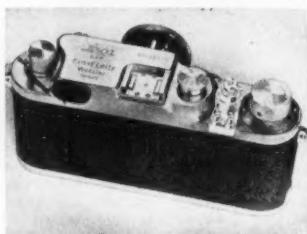
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NOTES AND NEWS

SYNCHRONIZER FOR LEICA AND CONTAX

A simple, yet positive, flash synchronizer has been created for use on all Leica and



Contax cameras by Photo Research Corp., 127 W. Alameda Ave., Burbank, Calif. Called Spectra Synch, this electrical contact is designed to work with all battery flash-guns. It retails for \$17.50 complete.

Spectra Synch is quickly screwed into the body release guard threads. Once synchronization is set, the camera is ready for all speeds up to 1/1000 sec. Due to its simple construction and location on the camera, it does not interfere with any of the normal operating adjustments, nor is there any drag on the shutter.

Once attached, it may be left in position permanently, or it can be removed instantly without changing the synchronization setting.

STREAMLINED CHEMICAL SCALES

The new Kodak chemical scales have a graduated beam with sliding weight and



are marked for both avoirdupois and metric systems. In avoirdupois the markings run from one to 75 grains, and in metric from one to 50 decigrams. Extra weights are provided permitting accurate weighing up to four ounces 66 grains avoirdupois or 130 grams metric. The scales list at \$9.75 and are available from all Eastman Kodak dealers.

NEW FILTER CASE

A scientifically constructed plastic filter case has been produced by the Tiffen Manufacturing Corp., 71 Beekman St., New York 7, N. Y.

The filter case is custom-built to fit each filter; no force is required to open or close. A slight twist does the trick, and the serrated edge of the case provides for an easy gripping surface.

The filters are held snugly in place in this dustproof case which is transparent to permit determination of color and nomenclature without removing the filter.

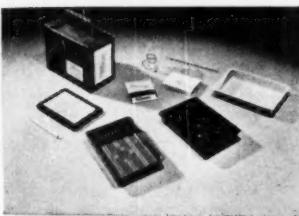
Prices range from \$1.35 (non-coated) to \$2.75 (coated), depending upon the series size.

CATALOG OF STEEL PHOTO ACCESSORIES

The Brumberger Co., Inc., 34 34th St., Brooklyn 32, N.Y., offers their 1951 catalog of all steel photographic accessories. Illustrated and described are such products as movie reels and cans, reel chests, slide and stereo binders, files and viewers, contact printers, darkroom safelights and many others.

BEGINNERS' PROCESSING KITS

Three photographic processing kits number among recent products of the Eastman Kodak Co. They will be generally available through all Kodak dealers.



The Kodacraft Printing Kit, which costs \$4.50, including tax, is designed to provide the beginner with all the materials needed for printing pictures.

The Kodacraft Photo-Lab Outfit, at \$7.95, including tax, takes up where the Printing Kit leaves off and provides basic essentials for developing films and prints.

The Kodacraft Advanced Photo-Lab, costing \$13.50, including tax, replaces the present ABC Photo-Lab Outfit, but consists of a number of additional items.

These units are all conveniently portable and are provided with complete instructions.

DIRECT READING EXPOSURE METER

The Federal Instrument Corp., 14-02 Broadway, Long Island City 6, N. Y., have developed the Ideal direct-reading photo electric exposure meter, which they claim is the simplest and easiest-to-use ever designed.

When the meter is held up toward the light source, the pointer indicates directly the correct f-stop for the user's camera lens. There are no light-value figures, no figuring and no dial-turning necessary, as the meter reads in f-stops the same as the camera lens. This is made possible by the new automatic computer which is pre-set for any film or shutter speed.

Technically, the Ideal meter is the "incident light" type. The extra large photocell is covered by a fresnel-lens light collector

to gather and concentrate the light. The meter retails for \$8.95 and is supplied with a three-year factory service guarantee.

N.Y.I. AND YOU

Aside from the financial opportunities open to any age group, a first-class working knowledge of photography is also a definite advantage towards enjoying it as a hobby.

The New York Institute of Photography, the oldest and largest in the country, offers complete training courses in every phase of photography. If you are unable to attend the Resident School you can profit by the convenient Home Study Course.

Men of military service age will be wise to take this special training for use in the service. Those already vets must start the resident courses by July 25 to take advantage of their GI Bill of Rights.

The N.Y.I. descriptive booklet, which is a beauty, lists an amazing number of courses which will prove of interest to you. Write to the New York Institute of Photography, 10 W. 33rd St., New York 1, N. Y.

SOLUTION TEMPERATURE CONTROL

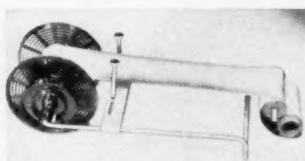
Two systems for accurately controlling darkroom solution temperatures have been developed by Minneapolis-Honeywell Regulator Co., Brown Industrial Division, Wayne & Roberts Avenues, Philadelphia 44, Penna.

The new systems are based on heating or cooling the water bath surrounding the developing tanks. The primary controller detects changes in the water temperature and automatically governs the action of valves, heaters or refrigerators.

One system, for black and white film, is used where factors permit free and continuous circulation of water through overflows. The second system, for both black-and-white and color work, is applicable where water conservation is important.

DARKROOM TIMESAVER

A time-saving device for darkroom use, the Reeloader, which reduces reel loading time down to seconds, is being marketed by R. J.



Cory Enterprises, 5107 So. Blackstone Ave., Chicago 15, Ill. Of sturdy construction, the Reeloader is designed to fit all FR tanks. A special locking device holds the reel in place while two adjustable upright bars guide the film onto the tank.

The utility and convenience of the Reeloader make it an indispensable addition to every amateur's darkroom.

PRE-SET IRIS FOR SINGLE LENS REFLEXES

The Hall-Barkan pre-set iris for single lens reflex cameras is being manufactured by Hall-Barkan Instruments, Inc., 55 Columbus Ave., Tuckahoe 7, N. Y. It is installed on the lens mount and is designed to operate from there without affecting the normal operation of the camera.

With the Hall-Barkan pre-set iris, the photographer can focus on his subject and compose the picture with the lens wide open, and return the diaphragm to its pre-set opening with a flip of the finger the instant before exposure.

HOME MOVIE TRICKS

Home movie enthusiasts will be glad to know that a new booklet on editing and titling home movies has just been published by Bell and Howell Co. It sells for a nickel and is entitled "Tips on Editing and Titling."

To get your copy, just ship your nickel directly to Bell and Howell Co., 7100 McCormick Road, Chicago 45, Ill., mentioning AMERICAN PHOTOGRAPHY.

TIMER MEASURES SECONDS

One of the new products of the FR Corp., 951 Brook Ave., New York 56, N.Y., is an



electric exposure timer for automatically making exposures from one to 50 seconds. This timer is priced at \$8.95 complete.

The timer is designed specifically for use in the darkroom. The manufacturer states that its accuracy is well within the latitude of photographic papers, with a possible variance under five percent. They also claim that its accuracy is not affected by variations in electrical current or temperature.

The FR automatic exposure timer operates in coordination with enlarger or contact printer, automatically shutting off light source when interval has been completed. Provision has been made for a constant light when focusing and composing.

In addition, the timer is equipped with a pre-setting ring which may be pre-set to any interval desired. Of plastic construction, it is corrosion and chemical resistant.

1951 MOVIE CATALOG

The largest catalog ever released by Sterling Films is now available. Over 100 16mm films are listed, with almost half the contents new releases issued for the first time.

Home movie fans will find a diversified selection in all categories: sports, musical concerts, adventure, educational, documentary and children's films.

Free copies may be obtained at local stores or by writing directly to Sterling Films, Inc., 316 W. 57th St., New York 19, N.Y.

ROLLEICORD III

A new camera model of the Burleigh Brooks Co., 10 W. 46th St., New York 19, N.Y., the Rolleicord III, incorporates many



advanced features in design and engineering.

There is no red window on Model III. Insert the film, close the back, which automatically engages film counter and locking device, then a mere turn of the knob brings the film to a stop for the first and any subsequent exposure.

The focusing hood is equipped with a built-in sports view finder for quick action shooting. The large built-in magnifier covers the entire ground-glass image.

The ever-ready case of genuine leather has a spring-actuated top which folds front and top down as one unit, allowing unobstructed use of the camera while shooting.

List prices remain the same on this new model, \$140 with the Schneider Xenar f/3.5 lens and \$130 with the Zeiss Triotar f/3.5 lens.

PRECISION PHOTOMETER

The Macheth-Ansco Color Densitometer, a product of the Macheth Corp., P.O. Box



950, Newburgh, N.Y., is an ultra-sensitive precision photometer with a wide range of diversified uses in many industries. It can be applied to photography for density measurement of photographic materials, both color and black and white, and for the determination of color temperatures.

This versatile instrument permits accurate measurement of color densities in narrow spectral ranges, as well as visual densities over an unusually wide range.

ECONOMY SIZE COLOR FILM PACKAGES

Ansco, Binghamton, N.Y., is now producing color film in bulk loads. The 35mm factory-packaged bulk loads contain five 20-exposure lengths of film, notched and numbered for the convenience of both ama-

teur and professional photographers. These 35mm bulk loads retail for \$7.46, a savings of more than \$3.50 over the same number of exposures in individual magazines.

PHOTOFLASH INFORMATION

A new method of firing photoflash lamps has been developed by the National Carbon Division of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N.Y. Originally called the Battery-Capacitor System, it is now termed B-C.

Available are copies of their Battery Engineering Bulletin No. 5, which discusses various photoflash systems, including the B-C type. It outlines the problems connected with flash photography and offers practical solutions to many of them.

The Eveready Battery Replacement Guide for B-C and Slave Units is also available.

COMPOSITIONAL GUIDE

Under the trade name Comprise, Victor Corrado is making and marketing a compo-



sitional guide for framing photos, scaling and speedy, accurate cropping. It is available through photo and art supply stores, or direct from the manufacturer, Victor Corrado, 185 N. Wabash Ave., Chicago 1, Ill.

Comprise, which retails for \$1, is made of two pieces of right-angled plastic, 1x1/8 inch. Each leg is six inches long and is slotted so that when assembled and held with spring washers, Comprise forms an adjustable frame with ruled calibrations to 1/16 of an inch on the four inside working edges. The spring washers allow any adjustment from 5x5 inches to 1x1 inch while holding the frame firmly at the set position.

Comprise can be set for accurate right-angle corners or oddly shaped four-sided areas.

PEERLESS CAMERA CATALOG

Peerless Camera Stores, 138 E. 44th St., New York 17, N.Y., has available a free winter edition of their 1950-51 catalog. Entitled "Photographer's Bargain Guide," the 48-page book is filled with such items as still and cine cameras, projectors, enlargers, accessories and darkroom gadgets.

NEGATIVE AND FILM PRESERVER

Now available for general use on slides, stills, color and black-and-white as well as amateur movie films is Cinelac, a product of the Cinelac Co., 610 Fifth Ave., New York City.

Cinelac is not a coating agent but it penetrates every particle of organic matter that makes the gelatin, toughening it while keeping it alive. This renders the film indefinitely pliable and impervious to atmos-

pheric conditions. It is simple to use and dries in a matter of seconds. A two-ounce bottle costs \$1.98.

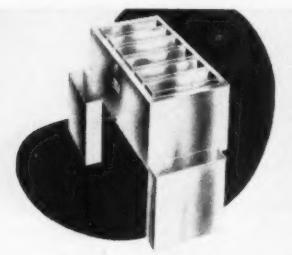
SUPERFLASH GUIDE NUMBERS

A new schedule of guide numbers for Superflash lamps is being issued free of cost by the Engineering Department of Sylvania Electric Products, Inc., and is available at camera stores everywhere. The revised figures are the result of the latest laboratory analyses of film speed characteristics, reflector designs and the light output and time characteristics of all Superflash lamps.

The charts cover all sizes of Superflash for ASA exposure indices from five to 250 and include special section on blue bulbs for all the leading color emulsions.

COLOR PROCESSING OUTFITS

Calumet color processing outfits are designed by the Calumet Manufacturing Co., 2326 So. Michigan, Chicago, Ill., for straight line production with a minimum of solution, in the development of sheet color films (Ekt-



tachrome, Ektacolor, Ansco Color and Printon). Each outfit consists of a stainless steel water jacket and the required number of insert tanks necessary to process the particular type of film. In all Calumet color processing outfits, the bleach tank is constructed of a special analysis steel for maximum corrosion resistance, in accordance with the recommendation of the manufacturer of the sensitized material.

CINE-KODAK SPLICING OUTFIT

One of the new Eastman Kodak Co. items is an easy-to-use Cine-Kodak splicing outfit



which can be used to splice either 8mm or 16mm motion picture film, silent or sound. Known as the Cine-Kodak Duo Splicer Outfit, it also contains a 20-ounce bottle of Kodak film cement, an extra bottle for water, a cleaning brush and screws for attaching the splicer to a rewind board.

It is priced at \$7.50 and available from all Kodak dealers.

MULTIPLE OUTLET BOX

A portable power outlet box, distributed by Sun Radio and Electronics Co., 122-124



Duane St., New York City, makes possible the plugging-in of eight standard Edison line cord plugs from one outlet.

Spelling an end to makeshift outlets in labs, shops, homes and offices, this new item adds many conveniences in addition to safety and efficiency. Incorporated in the metal box are two fuses with fuse extractors, preventing overloads or short circuits traveling to the main fuse box.

A double-pole, single-throw toggle switch turns off both legs of all eight receptacles. This feature is especially desirable in a lab or shop for use with a set of instruments. A neon pilot light indicates power flowing through switch.

MODERNIZED PROJECTORS

The Skyline Models, four new 2x2 slide projectors, recently released by the Society



for Visual Education, Inc., 1345 W. Divertsey Pkwy., Chicago 14, Ill., feature entirely new design and performance. The four models, A, B, C and D, are equipped with a honeycomb cooling system and a new optic system which is built as a unit for easy, safe removal. Prices range from \$34.95 to \$64.95. The deluxe model D is supplied with a 5-inch f/2.9 coated lens, an unusually fast lens for a slide projector in the moderate price field.

BINOCULAR CAMERA

Of special interest to sport fans is a combination camera and binocular, the Binoca, distributed by Random Corp., 415 Lexington Ave., New York City.

The small binocular is 3 3/4 x 2 3/4 x 1 1/8 inches; the power is 2.5 with adjustable focusing. Fitted inside the binocular is a precision-built 16mm camera with a 40mm telephoto f/4.5 lens; shutter speeds 1/25, 1/50, 1/100 sec. and B action. It retails at \$32.95 and uses 16mm black-and-white film at 59 cents per roll of 12 exposures.

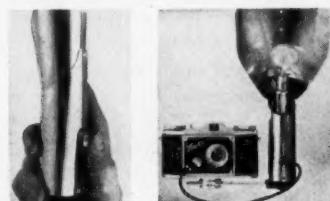
GEVAERT'S REVISED PRICE LIST

A new revised price list of their sensitized

photographic products is offered by the Gevaert Co. of America, Inc., 423 W. 55th St., New York 19, N. Y. In addition to giving the latest prices, it serves as a catalog as well, since it contains descriptions and data concerning the various films and papers currently available in the Gevaert line.

FOLDING FLASH UNIT

Another import from Germany being distributed by the Bennett Co., 837 Howard St.,



San Francisco 3, Calif., is the Finelux, a folding type flash unit. Weighing only six ounces, it is precision-made of stainless steel, measures 5 1/2 x 1 3/4 inches, and uses two C standard batteries. Model 1 is \$9.95; Model 2, \$10.95.

Finelux can be used in connection with almost any camera with flash synchronization. It comes equipped with either extension bracket or with shoe (for accessory-clip type cameras) and with cables for ASA flash shutter cameras, Compur-Prontor shutter cameras or Finetta cameras.

LENS UNITS FOR LARGER LENSES

Owners of larger lenses need no longer hunt for combination lens hood and filter



holders to accommodate them, because Enteco Industries, Inc., 610 Kosciusko St., Brooklyn 21, N. Y., now has a complete line of these units designed to fit the larger lens barrels of long focal length lenses.

The Enteco Professional lens hood and filter holder combinations come in all sizes to fit lenses with outside diameters of from 44.5mm (1 3/4 inches), to 85mm (3 3/8 inches). The filter holders accommodate two to three-inch filters, depending on the size of the lens to be fitted. Prices range from \$4.25 to \$12, plus tax.

DARK SLIDE HOLDER

A handy new slide clip that fastens to the ground glass cover of all Pacemaker and Century Graphics without tools to hold your dark slide while taking pictures is now available to all camera stores. Known as the Graphic Slide Clip, this useful accessory is distributed by Graflex, Inc. In use, it does not interfere with the normal operation of the focusing hood.

Received just as we went to press:

EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.

Dear George:

As you undoubtedly have heard we're going to have a Regional PSA Convention here in Rochester on March 2, 3, and 4. From all indications this is going to be a bang-up affair offering events that will appeal to everyone and to help make it completely successful we'd like to enlist your cooperation in letting the world know about it.

The program as it looks from this view point shapes up about like this: on Friday, March 2 the morning will be devoted to registration and probably the first of many groups of private bull sessions as old friends get together and begin to talk things over. The afternoon will be devoted to plant trips which will give those who attend an opportunity to see plants such as the Graflex, Wollensak, Bausch and Lomb, and Kodak Park establishments as well as the George Eastman House. In the evening there is to be a supper meeting at Cutler Union Building at the University of Rochester where T. H. Miller, director of photographic training, for Kodak, will be the keynote speaker. This will be followed immediately by the official preview opening—for the convention visitors and members only, of the Rochester International Salon of Photography at the Rochester Memorial Art Gallery. A pictorial and nature slide showing will be part of the formal opening.

On Saturday we're going to have an extremely busy day. The entire day will be devoted to a series of clinics on lighting a model, negative handling, equipment, print finishing, black-and-white and color duplicate slide production, a Flexichrome workshop, stereo photography, and home movies. These clinics, which will take place at the Rochester Institute of Technology, will not be one shop affairs, however. They are, according to our present plans, to be held two or three times during the course of the day so that if a clinic in which you are particularly interested is being held at the same time as another clinic that interests you you'll still have an opportunity to take them both in. This, we believe, is rather unique in convention procedure because it gives everyone a chance to hear practically everything if they want to.

At the same time that the clinics are taking place at R.I.T. there'll be a continuous showing of motion pictures at the Dryden Theater of George Eastman House. Speakers will supplement the showings. The Saturday morning speaker is not yet definite but on Saturday afternoon Edward A. Hill of Fleetwood, Pennsylvania, a nature photographer, will give an illustrated lecture on "Interpretations of Nature."

A convention banquet will be held on Saturday evening at the Powers Hotel. The program chairman tells me that there will be an outstanding speaker and a variety of entertainment but as yet that's all I can tell you.

On Sunday afternoon and evening the Rochester Technical Section, of the P.S.A., will present the following program at the Rochester Chamber of Commerce.

Dr. Bernard Landow, of Anasco, will talk on the Hersol Process.

John L. Tupper, Research Laboratory, Eastman Kodak Company, will talk on the Technical Aspects of Color Print Quality.

John Dessauer, vice-president of the Haloid Company, will talk on recent Developments in Xerography and Ralph M. Evans, superintendent of the Color Control Department, Eastman Kodak Company, will talk on Color Derivations.

We're hoping to have a really good turn out for this convention and I'm sure that you'll find it well worthwhile to attend. We certainly hope that you can make it and that both the announcement and the convention itself will provide good material for your column.

Cordially,

/s/ Bob

Editorial Service Bureau

RWBrown:PB



add color to your favorite black-and-white prints

Color is the key to the glowing beauty of Hollywood's bright stars. And, remember, your favorite family camera portraits will spring to life with the magic of Marshall's Photo-Oil Colors.

It's so simple! No special skill is needed! No messy colors to mix. You cannot ruin your favorite photo. It's always easy to remove your colors and make the changes which will add that professional touch. And, Marshall's Photo-Oil Colors cost but a tiny fraction of ANY OTHER COLOR PROCESS. Order your enlargements in MATTE finish and you're all set for the album treasure of a lifetime.

HERE'S A TIP from smart professional photographers. Take advantage of the faster shutter speeds obtainable in black-and-white and get sharp, clear prints. Then add Marshall's Photo-Oil Colors. You'll get the right, glowing, life-like colors of nature exactly where you want them.

Send 15¢ for the 32-page illustrated book "How to Make Beautiful Color Prints with Marshall's Photo-Oil Colors."

Ask for the new Free Marshall Rainbow Color Chart at your dealer.



The most popular color process of all!

MARSHALL'S
PHOTO-OIL COLORS

John G. Marshall Mfg. Co., Inc., Dept. A3, 167 North 7th Street, Brooklyn, N.Y.
Canadian Dist.: Canad. Photo Products, Ltd., 137 Wellington Street West, Toronto

Camp Fire Girls Celebrate 41st Anniversary

During March 1951, Camp Fire Girls celebrates its 41st birthday, and many of the organization's youthful photographers, from seven-year-old Blue Bird to 18-year-old Horizon Club member, will be clicking their cameras as they make lasting records of the festivities.

Camp Fire Girls learn not only to "look at the birdie" but also what makes the "birdie" click.

These young people find a chance to be creative, to use their heads and hearts and hands in creative arts craft, where wonderful worlds of art, of music, of books and of the theatre are opened to them. The girls earn honors through their exploration of many hobbies which in later life may become useful vocations or relaxing avocations.

Among the more than 360,000 Camp Fire members from Maine to California are many girls who take an intense interest in photography. Their manual, *Book of the Camp Fire Girls*, includes the following honors:

1. Go on a camera hike and take at least one picture of good quality.

2. Have a group exhibit of pictures you have taken; discuss their story-telling value, their general effectiveness.
3. Join or help organize a camera club for young people and attend meetings regularly for six months.
4. Make a pinhole camera, or make an inexpensive apparatus for use in printing pictures.
5. Collect an exhibit of several types of cameras, and point out their construction and how each works.
6. Take six good quality pictures indoors and outdoors showing that you understand the principles of composition, selection of background, handling of light and shade.
7. Take a roll of film using any two of the following devices: filter, portrait lens, light meter, flashlight device or flood lights.
8. Take three successful time exposure pictures either indoors or outdoors.

Campfire Girls Sibyl Caster and Rosselle Pekelis learn shutter operation with William Ross as part of their activity.



Joseph Mina Bing

Joseph Mina Bing, for more than 25 years one of the most influential forces in amateur photography and the photographic industry, died at his home in New York on Dec. 9, 1950, in his 72nd year.

He was an Honorary Fellow of both the Royal Photographic Society and the Photographic Society of America and the founder and President Emeritus of the Oval Table Society, as well as Commissioner to the USA for the Royal.

A native of Vienna, Mr. Bing was graduated from the University of Vienna with the degree of doctor of engineering. He became an officer in a guard regiment for the emperor, and later as an engineer, was engaged in consulting railroad work in Austria, Argentina and several Central American countries.

Keenly interested in photography, he was an official of the Camera Club of New York in its great period in the 20's and of the Photographic Society of America. In 1925 he became the first importer of photographic exposure meters, in which field he was an outstanding designer. Later he was one of the largest importers of cameras and other equipment.

In 1935 Mr. Bing organized the Oval Table Society and remained its guiding power until his retirement from its presidency last November.

American PHOTOGRAPHY

second section

News from the Camera Clubs

by SAMUEL GRIERSON

THE LIVERPOOL AMATEUR Photographic Society (England) takes up the topic of photographic courses in camera clubs, bringing out a point worthy of consideration everywhere. In an article called "Mistaken Idea," included in its bulletin, it is pointed out that the function of a camera club or society is not mainly the teaching of photography but rather the encouragement of the efforts of its members. I quote one sentence: "Too often have we heard of club members who imagine that payment of the annual subscription entitles them to special tuition (such as might be given at a school of photography), and that the club dark-rooms and apparatus may be put to semi-professional use." This, as may be noted, is not in criticism of those clubs promoting photographic instruction and charging a special fee for it. Too many clubs do not charge this additional fee, and they are making a mistake. The bulletin of this association is edited by E. H. Austin, and he may be the gentleman who wrote the article. In any case I say, "Bravo!"

The camera clubs of Fairfield County, Conn., recently formed a club council and elected Henry W. Barker of Stamford its president. Bridgeport, Danbury, Darien, Greenwich, New Canaan and Norwalk camera clubs plus four of Stamford—the Cyco, Machlett, Schick and Stamford—make up the group. Recently they held a photo carnival in which all of the member clubs were well represented by both prints and color slides.

It is always nice to see the name of Dr. Max Thorek turn up in print. Here is a man who sticks to his avocation year after year, supporting the salons and seemingly never running out of ideas or tiring of his hobby. True, there are others, but the good doctor

comes to mind by a notice in the *Fort Dearbornian*, bulletin of the Fort Dearborn Camera Club, stating that, with Phil Wahlman and Leonard Purin, he judged a black and white print contest. Not interrupted by a phone call from the hospital either! O.K. Fort Dearborn, you can always avoid that by just cutting the telephone wires!

Irene M. Heffner of the Albany, N. Y., Camera Club wins again! Reporting the winnings of Mrs. Heffner is becoming routine for she wins so often. This time it was \$25 in merchandise from the establishment of McManus & Riley (Albany) for her picture, *Winter Sparkle*. Arnold Wise of the same club also was a winner in this contest, receiving \$15 in merchandise.

The Hudson-Mohawk Camera Club Association, made up of the Amsterdam, Albany, Glens Falls, Gloversville, Schenectady and Troy camera clubs—New York State, of course—issues a nice booklet in connection with its inter-club competition. The officers are listed as are the judges. A listing of the clubs with a blank space for the entering of scores makes tabulation easy for those attending. One or two pages of information regarding the association complete the booklet. A fine idea and one that other associations and councils might well consider.

The Green Briar Camera Club of Chicago voted to drop the small print contest from its program. This because of lack of support! Because of the popularity of the small print contest in so many clubs I don't catch on! At certain meetings I have attended, I have seen as many as 40 or 50 prints entered in the small print competition. Recently I reported on a mid-western club's raving about the idea in its bulletin. Well, that is how it is, and I am sorry that

Green Briar members didn't find it to their taste. Maybe this is something for the future!

From the bulletin of the Delaware Camera Club (Wilmington) I learn that this organization will see its 20th birthday in the year 1951. The exact date is not mentioned, but that is not necessary. Congratulations are in order. And whoever edits their bulletin deserves a word of praise, too, for the sheet contains more news per line than many, many other club papers that reach my desk.

The Miniature Camera Club of Philadelphia prints a brochure listing its officers, meeting place and complete program for every meeting of the year. While the idea is not new it has not been done often, mainly because clubs do not generally make up a year's program in advance. Such a piece of printed matter on hand to pass on to guests and interested persons makes the gaining of new members quite simple. I know because my own organization did this in past years, and prospects were impressed. From the programs listed, a great many worthy people will address the meetings. For instance, Howard Yawn of the Yawn School, Charles Heller, Gottlieb Hampfer and Gerald Tattersfield, to name but four. So there would be no doubt as to their sex, the compiler of this brochure placed a "Mr." before each name! As I have criticised other sheets on this same point, I see no reason for letting this one off. Yet the point is a minor one and does not completely damage this "Schedule of Events."

That is indeed a good, detailed report issued by Merl S. Ewell of Los Angeles concerning the National Color Slide Competition sponsored by the Color Division of the PSA. I am sure that the clubs and the people participating do appreciate the work and effort Mr. Ewell must put in, and I am glad to add my pat on the back. Many people do not realize that in making up a report such as this, one doesn't dare make a mistake. When a mistake does occur complaints pour in and something just short of lynching happens. Wonder how many letters Mr. Ewell received because that October 1951 dateline should have read October 1950?

*The meters
most
photographers
use...*



Scholastic Magazines, Ansco Sponsor Contest

Cash prizes, scholarships and merchandise are offered junior and senior high school students participating in the 1951 Scholastic-Ansco Photography Award Contest sponsored by Scholastic Magazines and the Ansco Division of General Aniline & Film Corporation with the cooperation of leading retail stores.

Awards include two two-year scholarships at the Fred Archer School of Photography, Los Angeles, and one scholarship at the Progressive School of Photography, New Haven, Conn.

Cash prizes are offered for the three best pictures in each of 14 classifications. These prizes are automatically doubled for pictures taken on Ansco Film.

In the color transparencies classification a 200-watt projector and case are offered as a special prize for all-around ability in color photography. A similar projector and case are also offered for outstanding work in flash lamp photography.

There is no limit to the number of pictures students may enter in any or all classifications.

Leading retail stores are handling the contest in most areas but students in localities where this is not done may write for rules and entry blanks to Scholastic-Ansco Photography Awards, 7 E. 12 St., New York 3, N.Y. Closing date, March 15.

Ansco Is Market

Ansco is currently interested in purchasing black-and-white photographs for use in its advertising program.

People, particularly young people, are preferred as subject matter. These pictures should feature action, human interest and have strong poster value. In addition, such subjects as children with animals, a parent with baby, teenage capers, sports and other pictures with story-telling qualities, action and popular appeal are best adapted for Ansco's style of advertising.

In keeping with these subjects, Ansco prefers pictures that reflect candid-type photography, i.e., in which persons, even though posed, appear to be unaware that a picture was made.

More Fun!

Get more fun out of photography by joining the P.S.A., where you'll be intimately associated with others having the same interests.

Complete details for the asking; write to:

Photographic Society of America

2005 WALNUT ST
PHILADELPHIA 3, PA.

Salons

Please submit salon calendar notices at least eight weeks in advance of publication to: The Editor, AMERICAN PHOTOGRAPHY, 421 Fifth Ave. So., Minneapolis 15, Minn.

6th Port Coborne International Exhibition of Photography. Four prints, \$1. Closes March 3. P.S.A. rules. Information from: Dr. G. B. White, 239 Sugarleaf St., Port Coborne, Ontario, Canada.

3rd Reading International Exhibition of Photography. Closes Mar. 12. Four prints and four color slides, \$1 each section. P.S.A. rules. Information from: August J. Heidrich, Central Y.M.C.A., Reading, Penna.

1951 Seattle International Exhibition of Photography. Closes Mar. 15. Four prints, \$1. P.S.A. rules. Information from: Ray B. Pollard, Salon Secretary, 4063 56th Ave. S.W., Seattle 6, Washington.

14th South African Salon of Photography, Johannesburg. Also exhibited at Port Elizabeth, Durban and Pietermaritzburg. Closes March 15. Four prints, \$1 or 5/-. Information from: Hon. Salon Secretary, P.O. Box 7024, Johannesburg, So. Africa.

2nd Exposicao Mundial de Arte Fotografica. Closes Mar. 30. Four sections: pictorial black and white prints; color prints; press black and white prints; color trans-

parencies, \$1 each section. Information from: Ila Exposicao Mundial de Arte Fotografica, Caixa Postal 118, Niteroi, Rio de Janeiro, Brazil.

7th Louisville International Salon of Photography. Close March 31. Two sections: Pictorial prints, limit four, \$1; color slides, four 2x2, \$1. Information on pictorial prints from: Ernest T. Humphrey, 4722 Burkley Ave., Louisville 8, Ky. Slide information from: Miss Catharine J. Wiley, 2082 Douglas Blvd., Louisville 8, Ky.

2nd International Festival of Color Slides sponsored by the International Federation of Photographic Art at Turin, Italy. Closes March 31. Four 2x2 slides and/or four others, maximum $3\frac{1}{2} \times 4\frac{1}{4}$. Information from: Dr. Renato Fioravanti, Società Fotografica Subalpina, Via Bogino 25, Turin, Italy.

Second International Rose Color Slide Exhibition. Berks Camera Club, 55 North 11th St., Reading, Penna. Blair M. Sleppy, chairman. PSA recommended practices. Closes April 2.

2nd Halifax International Color Slide Exhibition. Closes May 1. Entry fee, \$1 (checks should include exchange). PSA rules. Information from: Russell E. Heffler, P.O. Box 103 Bedford, Halifax Co., Nova Scotia, Canada.

Royal Photographic Society Pictorial Group Exhibition. Closes March 16. Four prints. Information from: Secretary, Royal Photographic Society, 16 Prince's Gate, London, S.W. 7, England.

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meet

Francis Wu

pictorialist



FRANCIS WU HAS NEVER been content with developing merely his own personal career in photography. In college, he organized a camera club of his fellow students and, after he had acquired an enviable salon record, he felt it was his duty to other photographic workers in China to organize the Photographic Society of Hong Kong.

Part of the necessary development of such a society was, of course, the organizing of an international exhibit which would stimulate interest in photography throughout the Orient. With a group of friends, Wu organized the First Hong Kong Salon and the opening date was set for Dec. 12, 1941.

Well over 600 entries were received and judged. Catalogs were printed. The prints were hung and the hall arranged for the opening.

On Dec. 8 (Asiatic time) the Japanese attacked Pearl Harbor.

To Francis Wu, the responsibility for the prints outweighed his own safety. What would the makers think if their prints were destroyed? How could there ever again be a Hong Kong Salon?

Secretly, Wu made more than a dozen visits to the club rooms, each

time carrying away an armful of prints. Since he could not secrete 600 prints in his own home, he concealed groups of 20 in the homes of his friends, keeping a careful record of their location, looking forward to the time when he could reassemble the salon.

The war was a sad time for photographers. To be seen with a camera was to invite a bullet from a Japanese sentry. Wu refrained from all photographic activity and managed to eke out a living in the brokerage business. Through these black years he was sustained by the hope that one day he would be able to go back to his profession, reorganize the Photographic Society of Hong Kong and hold the long-delayed salon.

With the return of peace Wu did jump back into photographic activity. He reorganized the Photographic So-

cietry, although many of its members had been scattered far and wide. He rounded up those salon prints which had not been confiscated or destroyed. The catalog which he re-compiled was a modest one, but the salon was held at last. It was a great success and remains a monument to the love of one man for photography.

Re-establishing himself in his profession was not an easy task. Many prospective customers had been ruined by war. All photographic materials were exceedingly scarce, and Wu was forced to work solely with a 35mm camera. On one occasion he was commissioned to make a portrait of Sir Cecil Hartcourt, the acting governor of Hong Kong. Sir Cecil was surprised to find the photographer working with so tiny a camera and obviously doubted if satisfactory pictures could be made with it. But Wu delivered several

Jack Wright presents the most outstanding Chinese photographer, long-known as an exhibitor, enthusiastic worker and stimulating influence

flawless 20x24 prints, and the governor was delighted. Wu still treasures a friendly letter of appreciation which he received from his distinguished patron.

Wu's photographic career began when he was just nine and he was given a box camera.

"With this," Francis was told, "you can make photographs."

He was so intrigued with this idea that he ran here and there, pointing the camera at his sister, his brother and the family cat. Then he opened up the camera to see the pictures. Instead he found only a roll of blank celluloid.

Carefully rewrapping the film, he took it to the drugstore to be finished. The next day he stopped by for his photographs.

"I do not know what happened," the druggist told him. "Perhaps the film was outdated. I am very sorry. I have put in another roll of film. This time you take your pictures and bring the film to me in the camera."

The second attempt brought satisfactory photographs of Francis' family. These snapshots laid the foundation of what was to be one of the strongest factors in Francis Wu's life.

Wu was born in Canton, but his family soon moved to Hawaii, where he received his early education. His father, the owner of a large wholesale and retail grocery concern, assumed that the boy would become a success-

ful merchant. However, Francis had other ideas. He was strongly drawn to sports and took part in baseball, football, basketball and boxing. For a time he could not decide which to make his career or whether he could make his living at one of them.

Returning to China to attend Linghan University, Wu found himself drawn more and more to artistic matters. For eight years as a student he was art editor of student newspapers and magazines. These interests finally overshadowed not only athletics but his plans to go into the grocery business.

His objective did not change from groceries to art suddenly. For a time he assisted his father in business, first in Canton and later as manager of the elder Wu's export and import branch in Hong Kong. It was here that Wu's interest in picture-making finally won out. He informed his father that he had decided to make photography his life's work. The parent was amazed that anyone in his right mind should want to give up a lucrative business in favor of messing around with paper and chemicals in a stuffy and unlighted room. But he realized that young men must be allowed to make their own decisions and let Francis go with his blessing.

Strongly influencing Wu to take up photography for a livelihood was his interest in photographic exhibitions. Although he had heard of camera

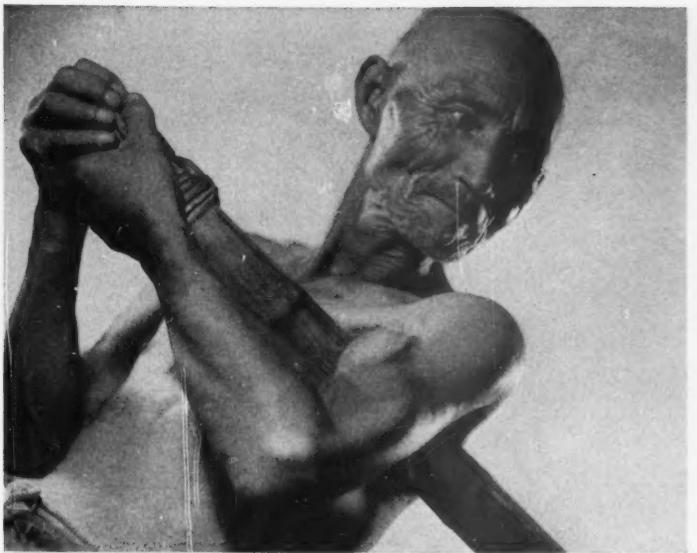
clubs, he had never attended a meeting of one. But he organized the University Camera Club at Linghan University, which drew together a small group who carried on their activities in spite of considerable difficulty in getting film, paper and other materials.

From the *British Amateur Photographer* Wu learned about salons, particularly the London Salon, which he especially admired because of its age and reputation. With some misgivings he bundled up six prints and mailed them off to the London exhibition. To his great delight two were accepted. One, entitled *The Village Belle*, was reproduced in *Amateur Photographer*. Not only was this one of the most thrilling happenings in Wu's life, but it confirmed his determination to make photography his life work. His salon successes still continue. His salon record for the year 1949-50, 104 prints accepted in 38 salons, placed him in a position 18th from the top among all the exhibitors of the world. He has been made a Fellow of the Photographic Society of America and of the Royal Photographic Society of Great Britain. Trophies, cups, certificates and other indications of salon honors fill a large cupboard in his home.

In his pictorial photographs—the ones he makes for his own pleasure and with no commercial motive in mind—Wu's tastes run strongly to portraits. His subjects are from the team-

Mirrored





The Boatman

Vanity

ing multitudes of picturesque people who inhabit Hong Kong. They range from gnarled and ancient men and women to charming children and girls. Wu enjoys photographing them not only because of their picturesque possibilities, but because he likes people.

"I do my best to learn the inner mood and personality of my subject and portray it," he said. "Sometimes this is a difficult task, but when I am successful I get some excellent pictures."

Landscapes are next among his favorite types of subject matter. "To anyone interested in landscape photography, the scenes of China afford unlimited satisfaction," Mr. Wu declared. "There is no monotony, for each season brings new perspectives. Each province of China has different features, giving the photographer a large variety of scenery from which to choose. To the landscape photographer China is a source of great delight."

Starting again, following the war, with the aid of his sister, Dolores, he has steadily built his business from modest quarters to the largest and most popular photographic establishment in the Orient. Staffed with more than 20 men and women, his studios and darkroom are in the famous Gloucester Arcade in Hong Kong. Wu tackles any type of photography—commercial, industrial, fashion or news.

The darkroom is equipped with six enlargers, including an Omega, a DeJur and a Leica. All printing and enlarging is scientifically and automatically controlled with meters and analysers to insure accurate results.

In spite of carrying out many commercial jobs personally, Wu still finds time for much pictorial activity. Not only does he make the pictures which he sends to the salons in a steady stream, but he carries on a vast amount of activity designed to spread interest in and knowledge of photography in China and the rest of the Orient. He does this not only because he thinks a knowledge of photography will bring pleasure and benefit to the Chinese, but because he believes they are particularly fitted to become adept and admirable photographers.

"When the Chinese first learn their character writing," he said, "they are learning a form of art, for the forma-





Lady in Waiting



Portrait of an Old Woman

tion of the characters is a delicate form of composition in itself. This is why the Chinese can do so much in the line of art with brush and ink. Because of their method of writing it is easier for the Chinese photographers to produce prints which contain a combination of art and photography. Delicacy and carefulness are parts of the everyday lives of the Chinese people. These characteristics are expressed in their pictures."

Although the Chinese have the advantages of a naturally artistic temperament and a wealth of beautiful landscapes in their country, they have certain disadvantages in regard to photographing their fellow countrymen.

"The model problem is a difficult one in China," Wu declared. "Model agencies do not exist. Many Chinese are unwilling to sit before the camera, being too conservative. I obtain my older models for character studies from among the poorer class of coolies. Even then I have to use all the persuasive powers I possess. Feminine models are obtained only by the introduction of friends and neighbors.

You cannot just go up to anyone you see and ask to take a picture. And after a model has been secured, he or she is likely to be inexperienced, with no idea of how to pose. As a result their positions are likely to be stiff and awkward. To make good exhibition pictures requires great patience and a wastage of a considerable amount of materials."

For many years one of Wu's personal aims has been to spread the knowledge of photography among the Chinese. To this end he has made many lecture tours, giving hundreds of talks. Besides this he has recently given much time to a magazine called *Chinese Photography*, which he and some friends have founded.

This was the first photographic magazine to be published in China. In addition to promoting photography in the Far East, it gives an opportunity for the Chinese to express their opinions and display their artistic taste and ability to the eastern and western worlds.

Francis Wu considered this idea for a long time before he finally approached a few friends and the Chinese Photo-

graphy Publishing Co. was formed. The magazine's first appearance was in January 1950. One of the original backers of the magazine is A. Kwan, proprietor of the Asiatic Lithographic Printing Co. of Hong Kong, whose knowledge and plant facilities contributed immensely to the production and success of the magazine.

James Kwok, another founder, is proprietor of a large advertising concern. Another who has not only helped *Chinese Photography* financially, but who has contributed many helpful and ably-written articles is David Choy. He has been in the photographic business for 20 years and has a clear understanding of the viewpoint and needs of the Chinese amateur.

The publishing venture started with no capital at all. Those who work on the magazine do so after hours. Handicaps are numerous and have to be overcome with patience. Most of the paper stock available in Hong Kong is unsuited for engraving. However Mr. Kwan is making steady progress in improving the appearance of the magazine.

At present *Chinese Photography* is

operating in the red, its losses being made up by its devoted backers. There are definite hopes that it will soon be in the black. Subscriptions are coming in and now total more than 10,000, many from countries outside China. The amount of good the magazine has done the cause of photography is already considerable.

Another project of Francis Wu's is the publication of pictorial books, one of which is already well along toward completion. *Chinese Classical Beauties* is to be an ambitious volume, designed to acquaint the world with the true greatness of Chinese feminine beauty, which, according to Wu, has never been depicted through photography.

"Unlike the women of some other lands," Wu said, "the Chinese woman is devoted, delicate, charming, dignified and never to be depicted in a bad mood. In short, the Chinese woman is classical. Her eyes, her lips, her facial expressions, her graceful hands offer a combination of attributes seldom found in the women of other races. It is these things I have sought to capture in my pictures."

Besides preparing the pictures themselves, Wu has devoted many months to the study of Chinese art and literature making ready for his book.



Early Morning

from "Chinese Classical Beauties"



Considering Pictures

L. Whitney and Barbara Standish



THERE IS NOTHING selective about the photographic lens since it clearly reproduces every well-lighted object within its field without regard for the important design principles of unity and subordination. It follows, therefore, that those who wish to use photography as a means of artistic expression must develop an ability to see and appreciate the essential elements of the subject and a talent for eliminating those other elements that detract. Far too often we see pictures that indicate an obvious sincerity of expression, but that fail simply because altogether too many distracting objects of little meaning have been included in the picture.

In spite of the virtues of simplicity, there is a real danger in carrying it too far. Much current criticism towards photographic salons has been directed toward those who have worshipped simplicity to such an extent that every semblance of vital reality has been removed from their photographs. Simplicity and directness of expression can tremendously strengthen a picture, but carry the process one step too far and the result is usually a poster-like effect that lacks any resemblance to reality.

Simplifying the usual conglomeration in front of the camera lens is no easy matter. However, as a photographer gains in experience, he gradually learns that there are a number of atmospheric conditions such as fog, mist, smoke and haze which can be of real assistance in eliminating unwanted detail and in helping him to portray more readily the important essentials of the subject.

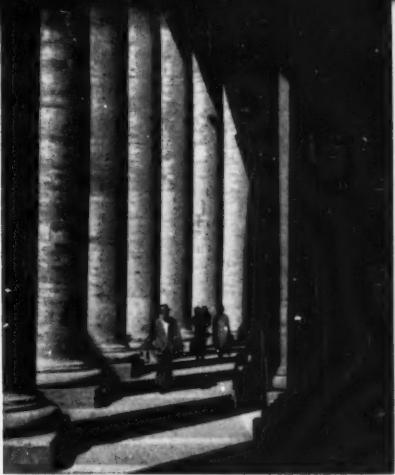
But, as the photographer progresses in the understanding of his problems, he realizes that essentially his most valuable tool is his own educated and selective eye. The human eye can perceive everything that is encompassed by the lens of the camera, and the trained eye will segregate those elements of the subject that have meaning. This is always the first step toward competence in photographic expression; and it then matters very little whether the photographer uses fog or mist, or whether he selects a very choice position for his camera—the main thing is that he has learned to be selective and, being selective, his pictures will have perception and a clarity of expression.

It is easy enough to talk about the importance of selectivity, but far more difficult to actually tell anyone how to educate his eyes so that they will understand what is important to his picture and what is unimportant and superfluous. We have the expression "cannot see the forest for the trees." In photography it is far more apt to be "cannot see the trees for the forest." Probably the best advice for the beginner is to make a great many pictures of a great many types of subjects and then examine carefully the manner in which other photographers have pictured similar subjects. In this connection, we are presenting a few prints made by Harold Elliott of Palo Alto, Calif. These pictures very nicely illustrate some of the methods that may be used to eliminate unwanted detail.

Mr. Elliott has been a photographic exhibitor for about 10 years, although his photographic experience is of considerably longer duration, and he is one of those who makes pictures for creative enjoyment. He says that his present inclination is less toward salon exhibiting and more toward making a few prints of varied subject matter with the size and treatment best suited to each and without reference to salon requirements. In examining a large number of his pictures, it is quite obvious to us that Harold Elliott has developed a highly selective photographic ability with a strong appreciation for form and structure.

Both *Autumn Burning* and *Scottish Mists* are excellent examples of the elimination of unnecessary detail by the use of mist and haze. *Autumn Burning* was taken on the Stanford campus in Palo Alto. The same picture taken without the smoke of the burning leaves would show a tremendous mass of disturbing detail. The solitary figure of a man raking leaves is very well placed and is nicely scaled to the clump of trees that rises straight and clear. There is just enough light in the background so that the print has a pleasing three-dimensional effect.

Scottish Mists has used the misty rain not only as a means for subduing and romanticizing the mountains and lake, but also as a pleasing backdrop for the series of interestingly spaced trees. We particularly admire the simplicity and restraint of this picture.



Sunny Colonnade



Autumn Burning



Ponte Santa Trinita

Harold Elliott

The print *Stalwart*, taken on the famous Seventeen Mile Drive from Carmel to Monterey in California, is a very simple and direct picture. The wind-blown shape of the tree group is very well spaced within the picture area, and the atmospheric haze has greatly simplified the background in the distance. Without this haze, it is obvious that the background would be far too dark in value and the shape of the tree group would not be nearly so effective.

In *Sunny Colonnade*, St. Peters, Rome, we have a strong architectural motif which utilizes deep shadow areas to eliminate unnecessary detail and emphasizes the strong sunlight on the columns. Essentially, the design is a series of strong repetitive verticals counterbalanced by the diagonal shadows. The rather inconspicuous figures help the design by adding scale and serve to emphasize the massiveness of the architectural elements. The dark column at the far left is a particularly good touch, since it adds a very effective enclosure for the design.

It is always a test of any photographer's ability to take a subject with an infinite amount of detail and build from

it a satisfactory and cohesive design. In *Ponte Santa Trinita* we have just such a subject, and Mr. Elliott has composed it skillfully with an excellent result. The picture was taken from a pension window, overlooking the Arno. The choice of camera position was exactly right and gives us a feeling of the city life flowing back and forth across the beautiful bridge. It is a particularly fine example of simplicity that may be effected in a complex subject by choosing the most strategic point of view.

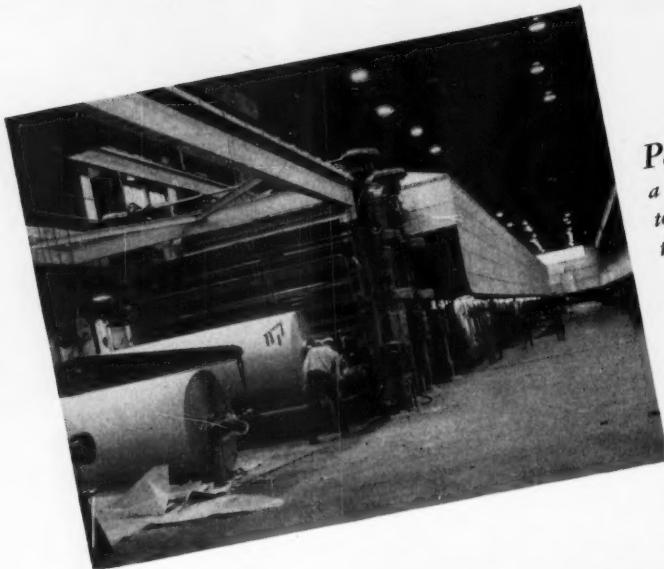
When submitting prints to the Standishes for criticism, please pack carefully and enclose return postage plus a stamped, self-addressed envelope for reply. Mail to: L. Whitney and Barbara Standish, 20 Fairfield St., Boston, Mass.



Scottish Mists

Stalwart





*Paul O. Anderson has found
a type of subject-matter new
to many amateurs. Try
tackling something different*

try shooting your hometown

INDUSTRIES

IF YOU'RE TIRED OF photographing statues and church steeples, if you've lost interest in shadows on patterned sidewalks or pretty girls holding beach balls, try shooting your home town industries.

The new problems will challenge your ability while the dramatic subjects will give new life to your pictures. Surprisingly little equipment is needed to do very creditable work.

Recently I stood with a small folding camera in front of a paper-making machine that stretched out 1000 feet and rose through two floors. The plant engineer walked up and looked at the camera.

"You're not going to take pictures here with *that outfit*?" asked the engineer. He looked as though he meant to say "dinky outfit."

"Sure," I answered brashly. I showed no sign of qualms, but the problem did look as though it needed more equipment than a Zeiss Super Ikonta B—which takes a 2 1/4-inch square negative—a flashgun, one small flash extension, a tripod and film. I had nothing else.

The engineer shook his head and waved his hand at the machine.

"She's all yours, Bud, if you can do anything with her."

Four hours of photographing every phase of paper manufacturing produced pictures as sharp and detailed as those made with a much larger camera.

The truth is that no amateur need be discouraged by a difficult photographic problem just because he hasn't thousands of dollars invested in equipment. While view cameras, stroboscopic and multiple flash equipment, wide angle and telephoto lenses have their place, an amazing amount of good work can be turned out with a minimum of equipment.

To the equipment described, a yellow filter, a red filter and an occasional roll of infrared film should be added for outdoor work. While the camera used in this instance is a comparatively expensive folding type, excellent results can be obtained with the moderately priced reflex cameras now on the market.

Industrial photography, however,

does provide complex problems for the man with limited equipment. Factory areas usually are large and dimly lighted. Machinery customarily is painted a dull black that soaks up light. Undesirable background details such as cuttings, waste or other debris are often present. Frequently a machine is under repair or not in operation, so action has to be simulated. A few general rules for taking pictures under these conditions are easily remembered.

First of all, where large, dimly-lighted areas are to be photographed in their entirety, fall back on that common practice of years ago—use a time exposure. Remember that a long exposure allows you to stop down for added detail. Naturally all pictures of more than 1/25-second exposure should be taken with the camera mounted on a tripod.

Often it is neither necessary nor desirable to picture a complex operation with one general photograph. Break the operation into steps, picturing each one, and your photographic problem immediately becomes easier.

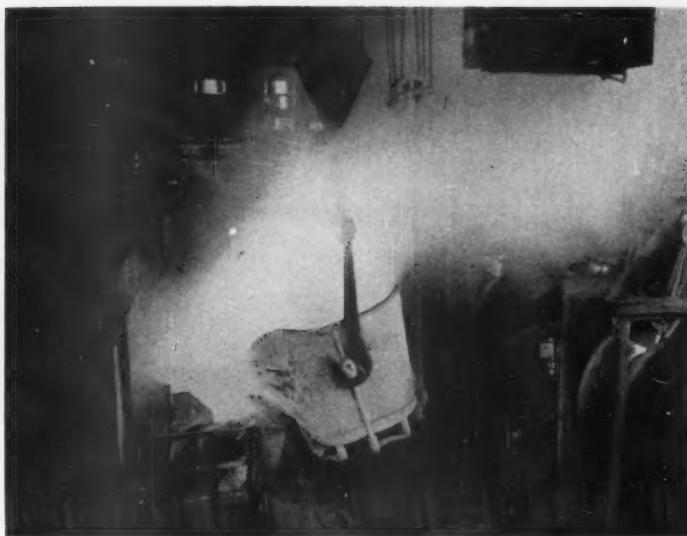
Having a figure in the picture is most important. This does not mean a crowd; generally one person is enough. Unless the action of two persons is co-ordinated, the observer's interest may be divided. Three or more workers look like a convention. Of course, there is the exception where a long row or rows of operators perform the same task. In this case the figures form a pattern that gives unity.

A few industrial pictures do not require a human figure. Where the operation is dangerous and a workman would obviously be out of place, or where the grouping of machines form a pattern, the general rule may be disregarded. Interesting patterns are often a part of an operation, and the photographer should be on the lookout to incorporate them into his pictures as major or minor themes.

Sometimes an idea or mood rather than actual operation of a machine should be pictured. On the other hand, sometimes the old and the new of industrial changes make a more interesting theme.

When you come to a plant without previous introduction, management may hesitate to permit pictures to be taken for fear of revealing a secret process or because the routine of the workers might be upset. Absolute integrity is essential on your part. Assurance should be given that photographs of any secret process are not desired, nor to be taken. It is well for you to remember that a manufacturing plant is private property and that you are a guest.

A preliminary tour of a plant saves time, and it is then you should look



Open flash illuminated this 15-ton ladle pouring copper.

for the best photographic angles and study the lighting. When you are ready to start shooting, disturb the workers as little as possible, asking them to continue their jobs and ignore the camera. Then shoot fast enough to catch the usual action.

A photographer often is just lucky enough to be on the right spot at the right time to get the perfect picture. Traveling light gives him an edge over the man with heavy equipment at such times.

These are general rules, but some examples will best illustrate them.

To photograph the long paper machine, a one-second time exposure at

f/16 was made. A center of interest was created by having an operator examine his machinery in the middle foreground. While having such a human figure in the picture is usually essential, there are exceptions. The photograph of the 15-ton ladle pouring copper is such a picture. Interest is centered on the huge ladle and the splashing metal. Small figures standing on the converter floor are not noticed by the casual observer, but do provide a minor human element. Exposure was one second at 1/16 with open flash.

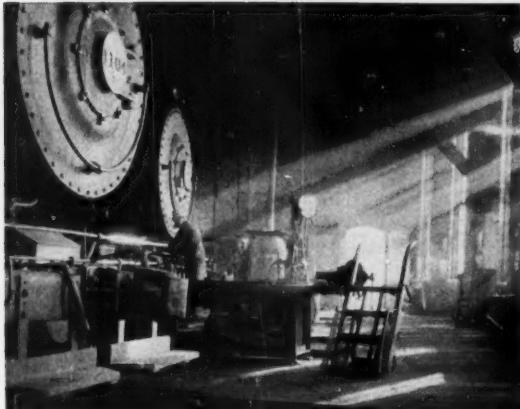
The pure pattern photograph also has no need for a human figure. The

Pattern shots give variety to industry coverage.

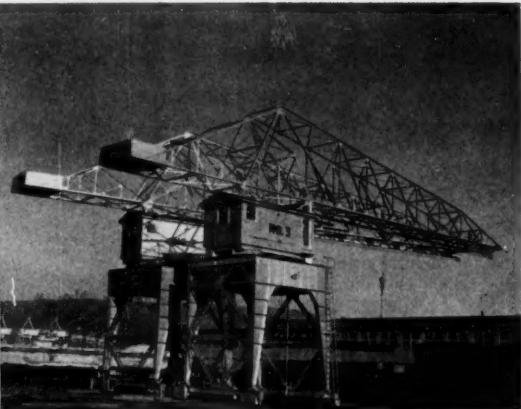


Ribs and ribbands add to picture-interest here.





A time-exposure was used in this dark railroad roundhouse.



A quickly-seen, quickly shot view of two gantry cranes in tandem.

picture of electrolytic cells used to break down common salt into its basic elements is a case in point. The photograph was taken through an observation window. Exposure was one second at f/22 with the camera focused at 25 feet.

Pattern can serve as a minor theme to add interest, as illustrated by the picture of two men planking a pleasure boat. Here the ribs and ribbands on the unplanked portion provide the pattern. A side light and front light were used with exposure of 1/200 second at f/16.

Normally, taking so many industrial pictures allows no wasted minutes, but sometimes the tempo is unexpectedly increased even more. At a door factory the management was slow in granting permission to take pictures, and it was 4 p.m. before a guide came

to conduct me on a tour. Examination of the various steps in the operation had taken 10 minutes when I asked what time the crew went off duty.

"At 4:30, just 20 minutes from now," the guide replied.

The next thing that guide knew, he was holding the extension and flashbulbs were popping. One dozen photographs were taken in that 20 minutes. All but one were satisfactory, and they provided a step-by-step story of door manufacture.

While such haste is not recommended, the man with light weight equipment can work very rapidly if it is necessary.

For the photograph of the french door in the press and most pictures of this type, the camera was between eight and 15 feet from the subject. Two flashes were used, one at the

camera and one at the side or, occasionally, at the rear of the subject. All exposures were taken at 1/200 second to stop action. Some blurring of the operator's hands or moving machinery is permissible to indicate action in pictures of this kind, but sharpness of focus is essential.

Since the negative of the small reflex or folding camera is generally $2\frac{1}{4} \times 2\frac{1}{4}$, you should use its full area. By cropping when the picture is taken, you will obtain more detail. Don't be afraid to move in close where action is confined to a small area.

An undesirable background often may be avoided by selecting the proper camera angle or by allowing the background to go black in the print—usually easy to do on pictures of this type. Judicious dodging also helps.

There are times when an idea or

Practice pays off in rapid shooting as in this picture.



Pictorial devices (like silhouetting) add in effective coverage.



mood should be reflected in a picture instead of the straight-forward presentation of an operation. A picture of a man hand-rubbing a leg of a Duncan-Phife table emphasized the idea of skilled craftsmen creating quality furniture, while machinery's place in a modern furniture factory was ignored. An older man for a model is preferable in such a picture.

For this photograph the side light was 45° to the right and behind the subject. Exposure was 1/200 second at f/16.

During the winter months industrial photographs taken out-of-doors introduce special problems. I once delayed taking a picture of a cedar pole creosoting plant until a day when there was blue sky and sunshine. As I drove out to the plant, clouds appeared from nowhere and played peek-a-boo with the sun. First I tried shooting the action with the sun at my back. Each time the crane lifted a pole, the sun disappeared, only to come out when the action was over. Finally disgusted, I moved around to shoot into the sun and clouds for a silhouette. As I set up the camera, the sun came out bright enough to burn the coating off my lens, but as the last load of logs was lifted from the creosote tank, the clouds moved in and the picture was taken. It was made at 1/100 second at f/22.

The two pictures taken in a roundhouse illustrate a changing era in railroading and contrast the two ways of lighting such subjects. The photograph of the old steam locomotives was a one-second time exposure at f/16, with workmen posed and warned to remain still. The other, showing workmen putting the liner in an A-frame for one of the eight diesel engines that make up a modern streamliner, was taken at 1/200 second, f/11, with one light at the camera and one light on the left side.

The photograph of two gantry cranes working as a team to lift logs from a boom in the water to railroad cars was possible because my light equipment was carried in the car at all times. I happened to drive by when the cranes were working and snapped the picture at 1/50 second, f/11, using a medium yellow filter.

For all these pictures, a moderately fine-grain film such as Plus-X was used with fine-grain developer. The time-temperature method of development was used with intermittent agitation in a tank.



This contrasts with the old-fashioned atmosphere of the roundhouse.

The model, the mood, convey the notion of patient craftsmanship.



GRIERSON'S word in edgewise



Samuel Grierson, A.R.P.S.

I REMEMBER! I REMEMBER! One of the very annoying things in life is that someone always remembers—and having remembered, airs the memories! However, I feel there can be no objection in this case as, in recalling the pictures of waves made by Arthur S. Mawhinney a good many years ago, beautiful photography is brought to mind. I do take my hat off to Arthur Mawhinney.

I am one of those outdated characters clinging to the habit of wearing a hat. This, however, always makes it possible to remove same when good and sufficient reasons present themselves!

My admiration for Mawhinney is based upon the fact that he bought a camera and learned to use it—not only learned, but mastered everything about its operation. Many years ago he entered a camera store and purchased a Leica, and he has used a Leica exclusively ever since. I will not say that the use of this certain camera is the reason for Mawhinney's excellent pictures; to produce good pictures one must have an inborn taste for the beautiful. I rather feel that had Mawhinney purchased any one of a dozen other good cameras and stuck to it, he still would have made grand photographs.

There are two angles to this thought. One of course is the beginner's exclamation to the effect, "you must have a wonderful camera to make such beautiful pictures!" which, as we all know, is just so much bosh. The other angle is that too many photographers go from camera to camera, never mas-

tering the technique of the box in hand sufficiently to be proficient in its use. And this going from camera to camera is generally combined with a going from film to film, paper to paper, developer to developer, and so on. Generally speaking, those who continually experiment rarely produce photographs of worth.

So Mawhinney stuck to this certain camera, to a certain film and to certain darkroom methods. Thus, technique behind him, he proceeded to make pictures. As noted, he first went to work on a series of wave pictures—not seascapes mind you, but true portraits of breaking waves—and the excellence of that series earned him the title of "wave man," a term he did not care for. So he stopped picturing waves and focused his attention and camera on man's friend, the dog.

This switch has resulted in an outstanding book, *Gallery of American*

Dogs, containing some 120 portraits of the finest dogs and breeds in this country. I am especially pleased that the book contains none of those cute pictures that so often clutter up the pages of animal books. Each picture is of a dog posed with dignity and respect. Yet they are all real, live dogs—not one in the collection gives the observer the feeling that here is a stuffed animal right from the museum case. Arthur S. Mawhinney did the photography and Katherine Holt Mawhinney helped with the posing. Text, giving full description of each dog, was written by an authority, Harry Miller. A nice addition and a helpful one is the pen and ink sketch of each animal by Paul Brown. I say "nice" because the Mawhinney photos are truly portraits, showing head and shoulders. The sketches by Brown give the reader a true picture of the over-all size and shape of each beast. The book is published by McGraw-Hill and sells for \$7.50. Worth every penny of that, too, to either dog lovers or the admirers of fine photography. Oh yes, there is an introduction by Roland Kilbon and a two-page afterpiece by Norris Harkness.

A reader of a contemporary publication, *The Woman's Home Companion*, calls the attention of its editor to the fact that in one of the photo illustrations, the pretty model is standing much, much too close to a bed of poison ivy! In my fiendish sort of way, I enjoyed this letter to the editor. I also consider him something of a good sport for printing it. The model in

Samuel Grierson, A.R.P.S., and Secretary of the Pictorial Photographers of America, (to note a few of the honors he has earned) contributes his informal monthly column on personalities and events in and around New York City. Mr. Grierson manages to keep up with almost everything that happens in that busy area, but will be happy to have you write him at 1155 Dean St., Brooklyn 16, if you have an interesting item. Camera club secretaries, too, are requested to send copies of their organizations' publications directly to Mr. Grierson, who acts as editor of "News from the Camera Clubs."



Eleanor Allen



Bagdad on the Subway

Karl F. Kunkel



The Arm of Winter

Irene M. Heffner

picnic attire was so close to the poison ivy plant that the leaves were rubbing against her skirt. (Skirt, huh! What a spot for a nude!) Yes, she got the poison, but the editor says a light case! Can that be fun? The photographer was on location and with him were two editors and an assistant. It is not stated what happened to this motley crew! Perhaps they are studying botany by this time, if not still scratching themselves. At any rate, it might be well for all cameramen to watch their sagebrush and other flora before placing the gal in that coy pose!

Around the year 1947, Edward C. Wilson of New York made a deal with Thomas R. Berry of Culmore, Londonderry, Ireland, resulting in the Ulster-American Print Circle. An exchange of prints between the Londonderry boys and the New York group was the ultimate aim, and in attaining this aim international friendships resulted which proved to be lasting. A small notebook was prepared and included with the packages of prints. In this book the participants wrote criticism, opinion and other pertinent items concerning each print. As I recall, Henry J. Beck, Karl F. Kunkel, Frank J. Soracy, Max R. Rubin, Lester Toloff, Wilson and myself were on the American team; Ireland sent prints by Berry, William C. Adams, J. Martin Poots and Ludwig Schenkel. Mr. Schenkel, as his name would imply, is not a native Irishman, but a refugee from Austria.

Between two groups, such an arrangement generally works out very

nicely. It has an intimacy not produced by a travel show going from club to club on tour. The criticism by the participants is an especially interesting feature, for here one gets a definitely foreign opinion and viewpoint, and political boundaries do make for some difference in critical standards. An exchange is not difficult to arrange. Locate the name of a club. Write to the secretary and ask if his outfit would be interested in such a deal. He will reply and things will build up from there.

I understand that the Photographic Society of America is now beginning to institute print circles in Europe and other distant places. This organization has had much success with such circles in the United States. With this experience on tap, something worthy may result in the new effort.

The Village Camera Club in Manhattan, reaching far into the Italian boot, recently exchanged shows with the Circolo Fotografico Milanese. William W. Irelan of the Village tells me that both clubs are very happy about it all and look forward to further exchanges. The New York opening was a really bang-up affair, attended by the Italian consul and other dignitaries representing Italy in this city.

Because I am one of the group included in a new exchange, my attention at the moment is focused on a pitch arranged by James Harry Ratcliffe of New York and D. E. McCormack of Birmingham, England. The group of photos being sent by Mr. Ratcliffe includes the work of Alfred A. Alsleben, Ruth Bissell, Ernst Ebenfeld,

Irene M. Heffner, William J. McCarthy, Levon E. Roubian, Dr. William F. Small, Edward C. Wilson, and Edith and Robert Worth. All are members of the Pictorial Photographers of America. The show will be hung at the Schrader Photographic Club, organization of A. Schrader's Sons. This being a company organization, its membership is limited to employees. One assumes that members may bring guests, but in any case the attendance is not too large. To assure a larger audience, Mr. McCormack has secured a second booking for the show at the Dunlop Photographic Society in the same city.

It is such things as, for instance, this second hanging at Dunlop that come as a result of close relations between two groups or clubs. Also both Ratcliffe and I have received some very fine letters from McCormack and at Christmas time this man sent me a package of cards to deliver to others in the circle whose addresses he lacked—a gesture everyone appreciated. All in all, in its small way, it may be a far better method of promoting international good will than the many methods employed by the politicians! I regret that, at this writing, I haven't a list of the names of those Englishmen who will take part.

Once again New York City will hang an International Salon! The Pictorial Photographers of America have managed to secure a late booking of Education Hall in the American Museum of Natural History and so, under the guidance of A. C. Vogt, A.P.S.A., salon director, the public may view the selections of Messrs. Fassbender, Mawhinney and Ruizicka during the month of June 1951. Again we bemoan the fact that hanging space is such a problem in this, the largest city in the world. That problem prevented the hanging of a salon in 1950. There was some talk of the Metropolitan Camera Club Council sponsoring a salon, but that lucky outfit saved themselves money and headaches by not doing so. One regret is that the salon could not be held in better season. The nice June days and the hot June days may give prospective visitors thoughts of cool places and the outdoors, and Education Hall may not team with salon enthusiasts as heretofore when, with winter hangings, it was warmer inside! Any reader who has not received an entry form may get one by writing to Mr. Vogt at 150 Hicks St., Brooklyn 2, N.Y.

"News Pictures of the Year"

At the moment I have before me a collection in reprint of *News Pictures of the Year* from the Seventh Annual Competition and Exhibition sponsored by the School of Journalism, University of Missouri, and the Encyclopaedia Britannica—two awe-inspiring institutions! This collection is edited by Clifton C. Edom, an associate professor at the school. These pictures were selected as best representing the news of the year 1949 and were chosen from some 3,000 entries. Had this collection been presented to me as a group of interesting and well-done photographs, I would have been more impressed, for that is just what they are. I can hardly consider a series picturing Chicago's "Skid Row" as news pictures. The series teems with interest

and drunken bums, but everyone knew the area and conditions existed—that's not news. Nor is it news to discover London has a slum! As a matter of fact, slum areas are to be found in every city despite proud mouthings of some mayors and other city fathers. If there lives a man or woman in such a state of bliss and innocence as to be unaware of the goings on across the railroad tracks, let's not shatter that little dream!

Leaving the slums for sports, I look upon "Bull's Eye," first award photo in this class made by John Rammel for the Decatur *Herald-Review*, as another swell camera job with little news value. It shows a rodeo contestant roping a calf, and that I would expect to see at such a contest!

Le Cook's print is from the Art Barn Camera Club, Salt Lake City, made for a monthly competition. To carry out the theme, the rain was "manufactured" by a garden hose. The ladder print received an honorable mention in the small-print competition of the Pictorial Photographers of America, of which Mr. Ebenfeld is a member.



Rainy Night

Le Cook



The Ladder

Ernst Ebenfeld

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Louise Haz Article

The Christmas issue of *Leica Photography* features an article by Mrs. Louise Haz. "Abstracts and Semi-Abstracts" tells of the usually undiscovered world of pictures in which most of us live. She dismisses the usual "good shots" to say, "There are hundreds of picture-making materials right in your own home." You can save mileage and shoe leather by setting up props for making abstract and semi-abstract pictures anywhere at home where there are a few square feet of space. Mrs. Haz lists the equipment she has found best suited to the work and gives an excellent definition of "abstract" and "semi-abstract."

Very soon AMPHOTO will publish another in the series on color which Mr. Haz is writing for us. These articles in expanded form will be available in book form later in the year.

How To Keep Ferrotype Tins

The proper preparation of ferrotype tins for that brilliant gloss on photographic prints is a painstaking procedure. Too much wax results in a dull finish, too little gives a blotchy appearance. Also, wax must be carefully polished and often replenished.

A perfect ferrotype surface can be quickly and easily prepared with silicone impregnated paper available at drugstores as Dow Corning "Sight Savers." These tissues, intended for polishing eyeglasses, deposit a thin,

uniform coating of silicone when rubbed over a ferrotype tin. This coating is non-greasy, will not attract dust, is longer lasting than wax and is remarkably effective in producing sparkling glossy prints.—B. P. Gray.

British Information Services

Available to all film users is a series of short films entitled "This is Britain." A release of British Information Services, the series consists of 115 items, each from three to five minutes in length. An unlimited number may be booked at one time and any combination will be spliced free of charge to facilitate screening.

A free classified listing of the series may be obtained from British Information Services, 30 Rockefeller Plaza, New York 20, N.Y.

Diffusing Flash Intensity

You can reduce the light output of your flashbulb to one-quarter of its intensity by removing the reflector from your gun. But if you need to reduce the power of a bulb close to your face, Ray Archer, Sylvania photo expert, suggests that you use the reflector and cover it with a thickness of handkerchief. This reduces the light output by one-half, or one f-stop. Two thicknesses reduce the light by two f-stops. This method is more comfortable than having the glare of a bulb so close to your eye, and gives a diffused light that eliminates harsh shadows.

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